

# Social Impact Assessment

## Problem Elephant Rehabilitation Centre (PERC), Lunugamwehera National Park

### Final Report<sup>1</sup>

5<sup>th</sup> August 2018

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<sup>2</sup> Main objective and specific objectives have been extracted from the project proposal with a minor edits to reflect the present position of DWC.

<sup>3</sup> Regional office did not have specific data on elephant deaths caused by people.

<sup>4</sup> Data available at LNP park office does not indicate the reasons for elephant death

<sup>5</sup> SIA team is not in a position to confirm the exact extent of land under cultivation by

## List of abbreviations

CBO Community based organization  
DS Divisional Secretary  
DWC Department of Wild Life Conservation  
EHG Elephant holding ground  
ESCAMP Ecosystem conservation and management project  
FD Forest Department  
FGD Focus group discussion  
GN Gramaniladari  
HEC Human-elephant conflict  
LNP Lunugamwehera national park  
PERC Problem elephant rehabilitation centre  
PMU Project Management Unit  
SIA Social impact Assessment

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## Executive Summary

This social Impact Assessment (SIA) is undertaken as an integral part of the proposal to establish a Problem Elephant Rehabilitation Center (PERC) within the Lunugamwehera National Park (LNP) under a credit line extended by the World Bank to the Government of Sri Lanka (Under the subproject proposal ESCAMP/DWC/EHG-LUNUGAMWEHERA/2B-02). The human-elephant conflict in Sri Lanka has assumed the significance of a national issue drawing the attention of the highest political authority in the country. HEC threatens lives human lives as well as elephants and results from wide and constant deforestation in the country, transformations in agriculture, land use patterns and expansion of human settlements. Forest density in the country also has been going down contentiously as a result of expansion of settlements and legal and illegal land acquisition. Department of Wild Life Conservation (DWC) is the key state organ, which is primarily responsible for both the preservation of wild life and also protection of people against attacks by wild animals. The proposal to establish a PERC emerges in response to the long drawn-out HEC in the country.

HEC causes considerable number of human and elephant casualties, damage and loss of crops and properties. There were close to 6000 wild elephants in Sri Lanka as of the elephant census in 2011. Increasing human and elephant casualties call for appropriate mitigation methods to protect humans and elephants. The proposal to establish a Problem Elephant Rehabilitation Centre (PERC) by the Department of Wildlife Conservation (DWC) comes in the wake of loss of lives and damage to movable and immovable property documented in this report. DWC already has previous experience of translocating elephants as a solution to HEC but their data confirms that translocated elephants return to their habitat travelling hundreds of kilometres. In response, DWC established the first Elephant Holding Ground (EHG) in Sri Lanka in Horowpothana in 2015 to house 30 to 40 problem elephants, which include those who had killed people or caused extensive damage to property. The EHG in Horowpothana provides insightful lessons for the design of the PERC proposed for the Lunugamwehera national park (LNP). The establishment of a PERC within the LNP has been proposed with a view to translocate and rehabilitate the problem elephants from the area as a solution to the human elephant conflict.

This SIA was conducted by two sociologists with coordination support from ESCAMP and DWC. Empirical data collection for this SIA was undertaken from 18 to 22<sup>nd</sup> June 2018. The SIA is based on a total of fourteen interviews and nine focus group discussions and three information dissemination meetings. Substantial number of government officials including Gramaniladaris, Samurdhi officers, social service officers, agriculture extension officers and development officers attached to divisional secretariats participated in the particular information dissemination meetings held at Divisional Secretary offices.

SIA concludes that based on the information communicated to the SIA team and the empirical data gathered in the field from 18-22<sup>nd</sup> June 2018, the proposed PERC does not lead to a negative social impact in the surrounding communities including those adjacent to the Lunugamwehera National Park. The informants, including state officials, ordinary villagers, farmers, leaders of CBOs etc are not opposed to the concept of a PERC.

The proposed PERC seems to have incorporated lessons learnt from the first EHG in Horowpothana and the second holding ground, has been designed not as a EHG but as a rehabilitation centre from which rehabilitated elephants can be released to a natural habitat under radio-collared observation. In terms of technology of construction, designs, and the entire system PERC appears to be an improvement both in an absolute sense and also relative to the EHG in Horowpothana. Therefore, in the view of the SIA team, this project does not interfere with the lives, legal livelihoods, security, and culture of the people concerned. However, it is extremely important that DWC maintains close monitoring to make sure that the PERC does not interfere with established elephant corridors and pathways.

SIA indicates the need to have an effective communication strategy to mobilize the people in favour of the project. Often misunderstanding or misperceptions or previous negative experiences with DWC can possibly push people to develop some sense of scepticism and resistance towards the project. But this scepticism can be overcome through effective communication with all stakeholders including key politicians, state officials, village leaders, religious leaders and ordinary people. SIA recommends various means of information dissemination including public notices, grassroots meetings, meetings with important religious and civil society leaders, and exposure visits to the first EHG in Horowpothana.

It is important to note that the PERC does have good potential to generate economic gains to the people in the area but this may require further research by ESCAMP and DWC. Creating economic opportunities needs thinking creatively and innovatively and developing new solutions. SIA also recommends expansion of existing economic opportunities by undertaking improvement to the current infrastructure within LNP. The project needs to create a sense of ownership among the people in adjacent villages and the region and recommends involving them in the preparation of material and construction to the extent warranted by their skills and capacity.

It is important to bear in mind that PERC should be an important project in a well-planned programme. PERC alone is insufficient to address the HEC in the general region. In the short, medium and long-term, ESCAMP and DWC need to implement a programme, which may include, capacity building within WDC, habitat improvement within the LNP, augmenting existing electric fences, introducing village and agro-fencing and their proper maintenance, halting deforestation and unsustainable development, improving livelihoods of people living around the park by infusing technology into agriculture and undertaking measures to develop the tourism industry. The whole issue

of human elephant conflict requires a broader vision and a plan of action. SIA recommends the adoption of a holistic approach in the longer term.

## Introduction

This social Impact Assessment (SIA) is undertaken as an integral part of the proposal to establish a Problem Elephant Rehabilitation Center (PERC) within the Lunugamwehera National Park (LNP) under a credit line extended by the World Bank to the Government of Sri Lanka (Under the subproject proposal ESCAMP/DWC/EHG-LUNUGAMWEHERA/2B-02). Elephants are an essential component of the ecosystem in Sri Lanka and also its culture in various ways. However, wide and constant deforestation in the country, transformations in agriculture, land use patterns, and expansion of human settlements have engendered a human-elephant conflict, which threaten the lives of human beings as well as elephants. Department of Wild Life Conservation (DWC) is the key state organ, which is primarily responsible for both the preservation of wild life and also protection of people against attacks by wild animals. The proposal to establish a PERC emerges in response to the long drawn-out HEC in the country.

This draft SIA report is structured as follows. The first part of the report provides an introduction to the Human Elephant Conflict in Sri Lanka with a view to situating the proposed project within the broader context. Moreover, the first part briefly discusses the lessons learnt from the first elephant holding ground (EHG) in Horowpothana. The second part describes methods of data collection and categories of informants interviewed while the third part explains the stepwise implementation plan of the social impact assessment. The fourth part of the report presents the empirical evidence collected and our analysis of the same. The draft report ends with a discussion of the findings and the key conclusions arrived.

## Human Elephant Conflict in Sri Lanka

“Elephants killed five people in this area. Destruction on farms is enormous. Most people here are farmers and now we find it difficult to do our job...”  
(Farmer, villager, Bodhagama, 20<sup>th</sup> June 2018).

The PERC within the LNP has been proposed to translocate the problem elephants from the area as a solution to the human elephant conflict. Human elephant conflict revolves around the issue of land sharing among both humans and elephants, deforestation and unplanned land consumption in Sri Lanka. Most of the large scale development programmes since 1930s such as Galoya and Mahaweli irrigation development after independence have resulted land acquisition and deforestation in the dry zone of Sri Lanka. Forest density has been going down contentiously as a result of this expansion of settlements and legal and illegal land encroachments. Therefore, development activities, which were concentrated in the dry zone, have more or less intensified the HECs. Recent mega-development projects in the South of the country such as construction of harbours, airports, and so on also have led to deforestation and

introduced pockets of elephant concentration in places such as Hambantota, Mattala and Demaliya. More and even greater scale deforestation is anticipated in the light of proposed large-scale development programme around Southern harbour and this development programme is likely to further aggravate the HEC in Southern Sri Lanka.

According to some studies, there has been alarming loss of 1000 elephants during the previous decade (IRI Technical Report 10-02, 2005). The last census of elephants conducted by DWC in 2011 found 5878 elephants (Personal communication with an officer, DWC, 19<sup>th</sup> July 2018). Some studies assert that around 250 elephants and 70 people are killed annually in Sri Lanka (Global Wild Life Programme Study Tour, 2017). The following table shows the causes of elephant deaths in Sri Lanka from 2005-2017, as reported by the DWC.

*Table 1 Causes of elephant deaths recorded annually*

Year	Gun Shot	Unknown	Electrocuted	Poisoned	Hakka Patas	Accident	Natural	Train Accident	Other Causes	Total
2005	73	14	9	-	-	14	3	-	10	<b>123</b>
2006	93	16	21	3	-	7	4	-	19	<b>163</b>
2007	85	40	19	6	-	23	16	-	-	<b>189</b>
2008	123	30	20	10	-	18	22	-	1	<b>224</b>
2009	113	49	19	4	-	14	8	-	21	<b>228</b>
2010	87	30	17	8	11	14	2	-	58	<b>227</b>
2011	67	62	18	16	36	22	2	-	32	<b>255</b>
2012	45	77	22	7	36	14	11	9	29	<b>250</b>
2013	35	54	27	6	32	6	25	7	14	<b>206</b>
2014	52	63	12	7	33	9	33	10	12	<b>231</b>
2015	44	39	17	5	51	6	11	12	20	<b>205</b>
2016	52	54	19	5	47	17	39	12	30	<b>275</b>
2017	47	55	25	8	51	28	22	7	13	<b>256</b>
<b>Total</b>	<b>916</b>	<b>583</b>	<b>245</b>	<b>85</b>	<b>297</b>	<b>192</b>	<b>198</b>	<b>57</b>	<b>259</b>	<b>2832</b>

Source DWC regional reports

Table 1 on ‘causes of elephant deaths’ shows that number of elephant deaths has in fact more than doubled from 123 in 2005 to 256 in 2017. According to the DWC data, most of the elephants killed during this time were of adult male elephants relative to juveniles and adult females. Between 2005 and 2010, on average, HEC caused 71 human deaths (Fernando et.al 2011).

*Table 2: Regional Distribution of Human Deaths due to elephant attacks 2005-2017*

Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
North Western	34	34	32	33	19	35	15	14	25	7	12	6	5	271
Mahaweli / Polonnaruwa	18	17	16	16	14	14	22	10	12	16	10	26	16	207
Eastern	9	17	15	9	10	14	5	15	18	22	15	20	23	192
Southern	12	10	4	8	3	9	5	8	3	9	7	10	10	98
Central	2	1	3	3	3	4	6	3	3	2	4	0	3	37
Yala Bundala	2	-	2	2	1	6	0	0	0	0	-	-	-	13
Uva	-	-	-	-	-	-	-	2	2	4	2	4	7	21
Anuradhapura	-	-	-	-	-	-	-	11	7	5	8	13	11	55
Killinocchchiya	-	-	-	-	-	-	-	-	-	1	0	1	1	3
Wavniyawa	-	-	-	-	-	-	-	-	-	1	1	2	3	7
Trincomale	-	-	-	-	-	-	-	-	-	-	4	4	5	13
Puttalam												2	3	5
<b>Total</b>	<b>77</b>	<b>79</b>	<b>72</b>	<b>71</b>	<b>50</b>	<b>82</b>	<b>53</b>	<b>63</b>	<b>70</b>	<b>67</b>	<b>63</b>	<b>88</b>	<b>87</b>	<b>922</b>

Source, DWC regional reports

HEC has become a severe socio-environmental issue in Sri Lanka, resulting in significant direct and indirect costs and losses. Dharmaratne and Magedaragamage (2014) affirm the costs of human-wildlife conflict in three broad areas including human deaths, injuries to people, and crop damages. HEC has a direct cost in terms of lost time of the farmers in their attempt to guard farm lands and properties, and compromising of family security. Different mitigating mechanism developed to confront the HEC also have their own opportunity cost. Several previous research studies have highlighted the changes of land use patterns in Sri Lanka as a fundamental cause of the HEC. Wickramanayake *et al* (2004) claim that land use pattern in dry zone agriculture including traditional *chena* cultivation has adversely impacted on elephant habitats. Santiapiilai (1996) also emphasized that spatial changes have adversely impacted on natural habitats. He considers translocation of elephants as a management method with regard to problem elephants but, nevertheless, points out that translocated elephants return to their former habitat after some time. From 2007 to 2011, 68 elephants were translocated and 4 among them died due to several physical, environmental and other causes. Fernando et.al (2011), argue that the capture and translocation of elephants do not mitigate HEC as most of translocated elephants continue to cause damage to human beings and farm lands. The capture and translocation operations have an elephant mortality of approximately 6 percent due to accidents. GPS monitoring via radio-collar units confirm the return of the translocated elephants to the original habitat and makes translocation highly inefficient and ineffective (Fernando et.al 2012; Pilapitiya 2014). Therefore, a sustainable and more

pragmatic mitigating method is needed in order to find a comprehensive solution for HEC in Sri Lanka.

## **The Project Details: Problem Elephant Rehabilitation Center**

Human-Elephant Conflict has become a serious issue in Sri Lanka, as considerable number of human and elephant casualties, damage and loss of crops and properties are reported. According to the DWC survey data, there were about 5878 wild elephants living in Sri Lanka by 2011, mostly, in the dry zone (Fernando et.al, 2011). Unsustainable levels of deforestation and patterns of land use for agriculture and for other development projects have intensified the HEC in the country during previous two decades. During 2005 to 2017, 2,832 elephant deaths were reported and 1,543 deaths were deliberate killings through shooting, electrocution, poisoning and increasingly through improvised explosive devises (hakka patas). Simultaneously, 937 people were killed by wild animals during this time (DWC regional reports). Increasing human and elephant casualties call for appropriate mitigation methods to protect humans and elephants. The proposal to establish a Problem Elephant Rehabilitation Centre (PERC) by the Department of Wildlife Conservation (DWC) comes in the wake of loss of lives, damage to movable and immovable property documented in this report. Ecosystem Conservation and Management Project (ESCAMP) is to implement the proposal to build a PERC through a credit line extended by the World Bank under the Ministry of Mahaweli Development and Environment, through a Project Management Unit (PMU). The Department of Wildlife Conservation (DWC) will implement the sub-project activities in order to achieve following objectives.

As per the project proposal the overall objective<sup>2</sup> of the overall project by DWC is mitigating the Human Elephant Conflict by providing a problem elephant rehabilitation centre where the problem elephants can be held as free ranging elephants under natural wilderness conditions in an area of around 3000 hectares, with the ultimate aim of rehabilitation and possibly return to the wild as fully free ranging elephants. The project has the following specific objectives.

1. To undertake an assessment of the situation with regard to elephants already in the existing Elephant Holding Ground (EHG) at Horowpathana for lessons learned to be incorporated in the proposed PERC in Lunugamwehera.
2. To design and establish a PERC in Lunugamwehera National Park based on lessons from the existing EHG at Horowpathana.
3. To release problem elephants captured from high HEC areas into PERC and provide basic requirements for the elephants to live as free ranging animals under natural wilderness conditions including creating a suitable habitat for food and water.

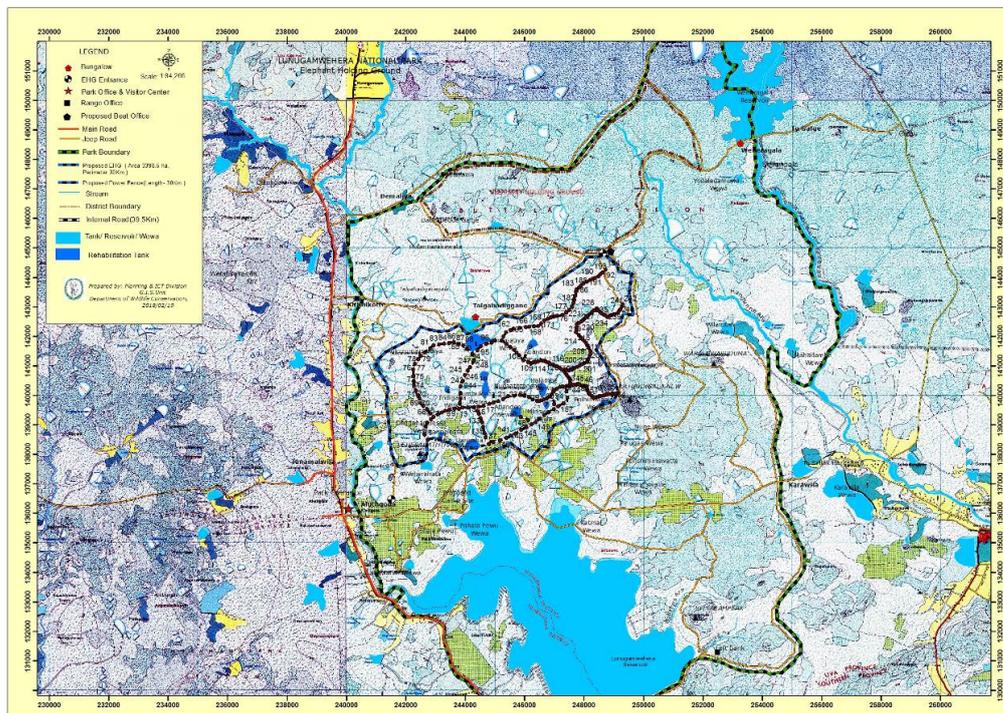
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<sup>2</sup> Main objective and specific objectives have been extracted from the project proposal with a minor edits to reflect the present position of DWC.

4. To study the behaviour and habitat utilization pattern of released problem elephants into the PERC.
5. Monitor and document the behaviour and welfare of the elephants released into the PERC.
6. Explore the possibility of rehabilitation and return of these elephants to the wild as fully free ranging elephants.

According to DWC, there were plans for establishing 4 PERCs in the country in Horowpothana, Lunugamwehera, Maduruoya and Galgamuwa. Initially, the proposal was presented to the parliament in 2012. As a result of that Horowpothana EHG was established in 2015. However, ESCAMP plans to build the second EHG as a rehabilitation centre of problem elephants as there is the potential for releasing rehabilitated elephants to the natural wilderness, once their behaviour becomes non-violent. Therefore, the project in Lunugamwehera will be the first of PERC in the country and perhaps in the world (Official, DWC, Personal Communication, 18<sup>th</sup> July 2018).

*Map of the proposed PERC and population information*



Proposed PERC (black dotted line in the map) will be established within the LNP. Understanding the nature of population among the proximate villages and Divisional Secretary divisions (DSDs) are essential in understanding social impact of the project. Thanamalwila, Lunugamwehera, Katharagama DS divisions in Monaragala and Hambanthota form the boundary of the LNP and are relevant to the project.

Thanamalwila DS division has 14 Gramaniladari (GN) divisions and the population is 26,683. Lunugamwehera DS division includes 36 GN divisions with a population of 33,664 while Katharagama DS division has 5 GN divisions with a population of 21,867.

## Lessons Learnt

The first elephant holding ground in Sri Lanka is located in Horowpothana, and was established in 2015. This EHG in Horowpothana, originally designed to accommodate only 30-40 elephants, provides insightful lessons for the design of the PERC proposed for the Lunugamwehera national park. The EHG in Horowpothana is located in a primary forest, which makes the location inappropriate as an elephant habitat as a primary forest can fail to generate sufficient food for elephants. Although LNP is also a primary forest, the PERC is to be set up in a forest land, which the wild life officials consider as far more appropriate as a habitat for elephants.

The researchers undertaking the SIA made an initial visit to the EHG in Horowpothana through the facilitation of ESCAMP and the DWC. EHG in Horowpothana, despite some negative publicity, has a solid infrastructure and so far, has not suffered any structural failure in its physical infrastructure. The DWC has monitored its performance and time to time and has made certain improvements. However, the escape of two elephants (including one tusker, as it can use its tusk to break the electric wire as the tusks do not conduct electricity) and subsequent coincidental attack by another wild elephant, which, according to DWC, was not one of those escaped, generated some public anxiety about the EHG. It is important to note that despite its physical resilience, the EHG in Horowpothana suffers from certain management loopholes such as absence of interior roads for monitoring and effective care of elephants, watch towers, services of a veterinary sergeant and support staff, *etc.* The officials of the DWC mentioned that they have taken serious note of these lapses and informed the SIA team that these would be rectified in the design and construction of the PERC in LNP (Officials, DWC, 5<sup>th</sup> June, 2018).

Several residents in Horowpothana were interviewed by the SIA team to find out if the establishment of the EHG in Horowpothana has had impact on the life security and livelihoods of the people of the area. Informants we met in two focus group discussions (FGDs) in our visit, mentioned that they had never experienced a security threat for human beings due to the EHG. However, there is some anxiety about the presence of elephants inhabiting the forest that surrounds the EHG. Some residents mentioned of occasions in which elephants roaming outside of the EHG caused some damage to farm lands. Some officials of the DWC as well as residents interviewed in Horowpothana were of the opinion that the wild elephants were used to walk towards the interior of the forest, which presently houses the EHG and therefore EHG has effectively blocked the access to interior part of the forest, which the wild elephants had previously enjoyed. This has resulted in elephants looking for alternative places during the rainy season and exposed some farm lands and households for possible risk of attacks by wild elephants living in or migrating to the area around EHG. Two key state officials who had served in

this area previously confirmed that the construction of the EHG in Horowpothana blocked some elephant pathways and corridors. These officials mentioned that because of the EHG, elephants turned to villages and started to damage farm lands. They further pointed out that they had to request some village fences to protect lives but were not able to project farm lands. Therefore, it seems the EHG affected the livelihoods of the farmers. The PERC in Lunugamwehera would, thus, have to undertake an in-depth study as to whether it would interfere with established elephant corridors pathways and a monitoring mechanism even after the project completion to monitor elephant movements outside of the PERC.

### Human-Elephant Issue in Lunugamwehera Park Area

This SIA has investigated existing records on the human elephant conflict in the proximate villages of Lunugamwehera National Park and consulted official reports on the same issue including past attacks by elephants, damages caused and human deaths caused by elephants in order to understand the gravity of the issue in study area.

Lunugamwehera Park office has reported three human deaths in 2017 and first quarter of 2018; the casualties were people age 60 and above. Two of the incidents had taken place in Wellawaya DSD and one in Lunugamwehera DSD. 14 deaths of elephant has been reported to LNP office during last four years and some of them were caused by the human involvement<sup>3</sup>. This SIA also studied official records on the nature of illegal human involvements within the Lunugamwehera Park and finds there is an increase of such cases. The following table shows the number of illegal incidents reported to the park office during 2015-2018.

*Table 3 Illegal human involvements reported to the park office, 2015-2018*

Nature of the case	2015	2016	2017	2018 (first quarter only)	Total
Entrance to the park without permission	03	06	14	01	24
Hunting	04	08	15	12	39
Cannabis cultivation	05	11	19	13	48
Illegal Fishing	02	02	03	10	17
Use or maintaining illegal weapons	03	05	13	01	22
Sand collection or selling inside the park	06	07	04	01	18
Use forest for grazing cattle	01	01	03	00	5
Others	03	06	08	04	21
Total	27	46	79	42	194

Source: Lunugamwehera National Park Office, 2018

<sup>3</sup> Regional office did not have specific data on elephant deaths caused by people.

As illustrated in table 3, it is clear that human involvement has been increasing annually and that it adversely affects the forest and wild life. Specially, hunting, cultivation of cannabis in the forest, use of illegal weapons and sand theft have increased during the given period. In addition to that, killing of elephants<sup>4</sup>, illegal logging, digging mines for gems, destroying archaeological sites to find treasures and other types of theft are reported under ‘other’ category. These activities represent the illegal human activities within the park. For instance, all four cases reported under “other” in first four months in 2018 were killing of elephants. Therefore, it is possible to assume that reported as well as un-reported human involvement have intensified the issue of HEC in the area.

## Research methods of the SIA

Empirical data collection for this SIA was undertaken from 18 to 22<sup>nd</sup> June 2018. The SIA team initially interviewed the Park Warden of the LNP and held a FGD with other DWC officials attached to the LNP. The SIA conducted a total of 15 interviews and nine FGDs and three information dissemination meetings, which were originally intended to be FGDs but became information dissemination meetings due to the dynamics of the discussion. However, substantial number of government officials including GNs, Samurdhi officers, agriculture extension officers and development officers attached to divisional secretariats participated in the information dissemination meetings held at DS offices.

### Interviews

Rev Mudarawane Sudamma  
Park Warden, LNP  
Park Warden (higher officials) Horowpothana  
Deputy Park warden, LNP  
Ex Director General and Consultant to the DWC (WSK Pathirathne)  
Coordinator (ESCAMP), DWC (PS Rathnayake)  
Divisional Secretary Tanamalwila  
Divisional Secretary Lunugamwehera  
Divisional Secretary Kataragama  
Range Forest Officer, Lunugamwehera  
Member of Pradeshiya Saba, Katharagama (Anura Abeysinghe)  
Member of Registered Tour Guide Association, Lunugamwehera  
District Secretary, Hambanthota (telephone interview)  
Former official in Horowpothana 1 (telephone interview)  
Former official in Horowpothana 2 (telephone interview)

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<sup>4</sup> Data available at LNP park office does not indicate the reasons for elephant death

### **Focus Group Discussions – Participants and places**

Wild Life Office, Horowpothana (Wild Life Officers)

Horowpothana (Community)

Wild Life Office, Lunugamwehera (Wild Life Officers)

Sittarama, Thanamalwila DS (Community and Agriculture Officers)

Kitulkote (Community)

Bodhagama, Thanamalwila DS (Community)

Karawile, Katharagama DS (Community)

Senukkuwa, Thanamalwila DS (Community and wild life officers)

Ranawaranawa, Thanamalwila DS (Community)

### **General information dissemination meetings with officials**

Divisional Secretary office, Tanamalwila

Divisional Secretary office, Lunugamwehera

Divisional Secretary office, Kataragama

### **Interviews**

The SIA team benefited from coordination support extended by the officials of the DWC and ESCAMP. The interviews adopted a very informal approach; the SIA team informed the participants about the proposal to establish a Problem Elephant Rehabilitation Center (PERC) in Lunugamwehera and the rationale for establishing a PERC as explained by the DWC. Officials of DWC described the lessons learnt from Horowpothana and how such lessons have been used to develop a technologically better fence and system of maintenance in LNP. The SIA team conveyed the interest of the team in learning and recording the views expressed by the public and interested parties including the officials. The officials of DWC and ESCAMP were then given an opportunity to answer questions from the informants/public regarding various issues including the PERC, the previous EHG in Horowpothana, and generally on the human-elephant conflict and methods adopted by DWC to combat the whole issue. The SIA team conducted face to face interviews with the selected informants in their respective work places or residence and FGDs were conducted in informal settings in the villages. The interviews allowed privacy and space to build trust with the informants and provided the informants the opportunity to express grievances/concerns and suggestions regarding the PERC in Lunugamwehera.

### **Focus Group Discussions**

A total of six FGDs were conducted in six villages, which were most adjacent to the LNP and hence likely to experience any potential impact of the PERC. FGDs, were important in capturing group dynamics and eliciting concerns/grievances and

suggestions, which emanated as a product of the group dynamics. The FGDs provided villagers the space necessary for them to engage in a fruitful discussion with the SIA team, express their views, and share their experiences in confronting the HEC. In the opinion of the SIA team, the FGDs including the visual presentations made by DWC gave the participants the opportunity to clarify their doubts, correct their misunderstandings and offer constructive suggestions.

## Deployment of Personnel and Terms of Reference

The SIA team consisted of Dr Dhammika Herath who is the consultant for this study. Mr Thushara Kamalrathne as a principal researcher functioned jointly with the consultant for all phases of the SIA. The officials from the DWC as well as ESCAMP provided logistical support, wherever that was possible, in terms of making appointments with potential informants. To the extent possible, officials from DWC and ESCAMP were given the space and opportunity to join the SIA team in the grassroots meetings to explain the technicalities of the proposed fence and the PERC. Data analysis and writing three drafts of the report were performed from 25<sup>th</sup> of June to 25<sup>th</sup> July 2018.

## Limitations and Assumptions

This social impact assessment, in fact, differs from a standard SIA given that this does not involve displacement and resettlement of people. SIA team assessed potential economic and social impacts and how the informants of the area received the project proposal, how the information could be disseminated and whether the project could lead to enhancement of opportunities of livelihoods. This SIA also depends on certain technical expertise provided by the DWC on elephant habitat, security guarantees of the fence, behaviour and life of wild elephants and so on. The SIA team assume that the proposed project would be implemented in its entirety and that there would not be failures of any of the subcomponents, which may include, among others, habitat enrichment, renovation of tanks and water holes within and outside of the PERC, establishing a veterinary facility, strengthening other electric fences, proper maintenance of the fences and so on.

## Social Impact of the Problem Elephant Rehabilitation Centre

We don't have a problem with your proposal (PERC). It does not affect our lives. It is a good idea to rehabilitate problem elephants. But if you bring elephants from other areas of the country, then, it will be a problem, (farmer, president of several CBOs, Sittarama, 18<sup>th</sup> June 2018).

I consider this project an asset. It will not save our crops but at least we have the guarantee that it will save our lives, (Young man, member of a local government body, place [redacted], 20<sup>th</sup> June 2018).

Based on empirical data gathered, the SIA team finds that the proposed Problem Elephant Rehabilitation Centre would not have a negative social impact on the public in the adjacent villages or generally other areas around LNP. The proposed PERC is to be located inside the LNP and the minimum distance to the closest village is two kilometres. Hence, there is minimal likelihood that the PERC would pose a danger to the lives of people living in close proximity or cause loss of livelihoods or damage to movable or fixed assets. However, this conclusion is based on reasonable assumptions and information provided by officials of DWC and ESCAMP. According to the information communicated to the SIA team, the PERC in LNP will be much more advanced in terms of construction design, technology, and material to be used. The SIA team visited the EHG in Horowpothana and observed that the fence stands firm and strong with no significant damage as on May 2018. In the opinion of the SIA team, except for insufficient height (7 feet), the fence in Horowpothana appears to be capable of fulfilling the objective of preventing the escape of problem elephants. The proposed PERC will have a fence, which is 11 feet in height and therefore, would provide strong defence against escape attempts.

The SIA would like to stress a second assumption, on which the conclusion that PERC does not lead to negative social impact is based; that the PERC does not block elephant pathways and corridors. The SIA team does not have the technical capacity to made assess this and takes into consideration the determination given by the DWC that the proposed project does block any pathway or corridor. This may however require constant monitoring by DWC even after the project completion.

As the name indicates, the centre in Horowpothana is an Elephant Holding Ground intended to hold 30 to 40 elephants. However the EHG suffers from several defects; it has no service roads inside and thus DWC officials are not able to go in to monitor and treat sick elephants or to keep track on elephant deaths. The EHG has no veterinary facility. Most importantly, EHG is situated in a primary forest, which is an environment that is not conducive as a concentrated elephant habitat. Further, elephants in Horowpothana EHG were not radio collared and hence their movements cannot be monitored. According to officials of the DWC, these structural weaknesses would be rectified in the proposed PERC in Lunugamwehera, which would be larger (3000 plus hectares), and will have veterinary facility with a doctor and support staff, interior service roads, and most of all, will be situated in a natural environment ideal as an elephant habitat. According to the information communicated to the SIA team, DWC also plans to undertake habitat enrichment in the PERC. The SIA team undertook an observation visit to the area earmarked for the construction of the fence.

## **Public resistance**

The SIA collected rich ethnographic data, which will be pivotal for the successful implementation of the proposed project. SIA team strongly recommends a graduated approach to the proposed project and would like to caution against complacency about

public resistance. Firstly, a former state official from Horowpothana mentioned that the establishment of the first holding ground caused public resistance in the area and addressing public concerns required coordinated efforts. A minister from the area, in fact, had helped the DWC in addressing public concerns and there were series of meetings with the public in Horowpothana as well as in Colombo. Although officials and public expressed some reservations and concerns over safety and possible impact of PERC on their livelihoods at the beginning of our interviews in Lunugamwehera, FGDs and meetings, other meetings ended after generating a good rapport and clear understanding that PERC would not lead to negative impact. Therefore, the likelihood of public resistance in and around Lunugamwhere, Tanamalwila or Kataragama would remain minimal as long as proper communication with the public is maintained. However, this was also an outcome of the extensive information dissemination process adopted by the SIA team as well as officials of DWC and ESCAMP. The team was equipped with photographs, a laptop computer and managed to secure a multimedia projector in some places. Thus, the team was able to disseminate adequate information to the public about the proposed PERC and in our judgment, informants were satisfied about the safety guarantees provided by the officials of DWC and ESCAMP. It is reasonable to assume that in the absence of such systematic and proper dissemination of information, a vacuum is created and the void would quickly be filled by misinformation and hearsay. Incorrect information gathered through media, especially about the EHG in Horowpothana does have the possibility to stir some resistance. Development Induced Displacement and Resettlement (DIDR) regimes recommend that public should be given full information about development projects well in advance and hence, provision of adequate information is an essential requirement (Oliver-Smith 1991, 1996, Cernea 1997, 2000; Muggah 2008b; Scudder 2009). It is important to stress that information dissemination should be conducted in a form and matter that is suitable for the communities living closer to LNP and preferably be coordinated by ESCAMP officers with a social science background.

### **Project affected persons**

The proposed PERC does not lead to displacement of people or farm lands or businesses and therefore, it does not require payment of compensation to individuals and business entities. The EHG in Horowpothana seems to have had some impact on elephant pathways in terms of blocking access of elephants to the areas where the EHG is currently located and this has interfered with elephant corridors. Thus, it is important to make sure that the proposed PERC would not impact on elephant pathways/corridors. It is important that DWC introduces a post-project monitoring component to study whether the proposed fence would in anyway affect elephants who already live in the area. Based on the field data collected and also information provided by ESCAMP and DWC, SIA team would like to conclude that the likelihood of PERC aggravating the HEC in elephant habitats inside or outside of the PERC and/or in forest lands belonging to FD is minimal. The proposed PERC requires 3000 hectares out of a total of 27000 hectares in LNP. Further, although identified by different names,

Lunugamwehera, Yala, Udawalawa and Kumana national parks are geographically contiguous and are connected with each other with adequate elephant corridors. In this broader picture, PERC in LNP takes only about 3000 hectares from over 100000 hectares of vast jungle. In this sense, the impact of PERC in terms of limiting the natural space for elephants is marginal. Nevertheless, it is important to mention that this conclusion is based on the project plan of undertaking significant habitat improvement within and outside of PERC and establishing water holes and renovating a number of tanks inside and outside of PERC. Therefore, successful implementation of the entire programme proposed is absolutely essential for the success of the PERC while the failure of any single component can have a negative impact on the overall project.

## Livelihoods

We have a severe issue from cannabis planters, sand miners, hunters and other people whom involved illegal activities inside the park. If internal roads are developed parallel to PERC, we can reduce those threats as a benefit of this project (official, DWC, Lunugamwehere, 18<sup>th</sup> June 2018)

The proposed PERC does not have any negative impact on legal businesses, agriculture or animal husbandry. One of the informants we met expressed that the proposed PERC would block some of the interior roads used by safari vehicles. However, officials of DWC explained that the construction of the fence would not block any existing road to LNP. There are however some illegal economic activities such as deforestation of lands belonging to the Department of Forest for chena cultivation, the use of grasslands within LNP for feeding domesticated buffalos and the use of DWC lands for cannabis cultivation. As the official cited above highlights there is also mining and hunting within the LNP. The proposed PERC does not directly impact on Chena cultivation or buffalo grazing but there some possibility that it can cause concern among those who engage in these illegal economic activities. Overgrazing by thousands of domesticated buffaloes has become an environment and health hazard in LNP and can limit the food supply for elephants and cause diseases. Illegal use of LNP for buffalo grazing would need to be stopped if that reaches or has reached unsustainable levels but this may require a graduated approach. However, attempts by the DWC to control this menace are hampered by the interference of politicians or bribes.

According to social safeguard policies of the World Bank (World Bank OP/B4.1, OP/B4.4, OP/BP 4.12 and the Government of Sri Lanka (NIRP), (Herath, D, RWD Lakshman, and A Ekanayake, 2017) illegal economic activities are not liable for compensation and hence theoretically falls outside the social impact assessment. Yet, pragmatically, some of the informants at the grassroots felt that the construction of a fence will at least be a mental barrier for these illegal economic activities and there is some slight possibility that those engaged in such activity may try to mobilize others against the fence.

Some of the informants asked about any potential economic gains from the proposed project. Ordinary villagers as well as government officials were of the view that the project should generate some employment to the local people.

If you are going to enrich one distant contractor, then no use for us. This can create a job network for people. Look at Aththutusevana...it has employed local people (villager, farmer, Tanamalwila, 19<sup>th</sup> June 2018)

When you build the fence and to take care of it, please don't bring people from Colombo or Matara. Take people from the village. Outsiders who come to work will not be always here. But if you recruit villagers, they are here even on weekends. Our people understand elephants better (villager, businessman, Kitulkote, 19<sup>th</sup> June 2018).

Informants at the grassroots were quite vocal in their assertion that employment opportunities, which may arise during the course of the project in the preparation of concrete pillars, construction of the fence as well as its maintenance, should strictly be given to people who live in villages and towns adjacent to the LNP. Informants stressed that recruiting local people to the project would contribute to not only its sustainability but also a sense of ownership. Several informants inquired about the possibility of encouraging tourism in or around the PERC, although some believed that violent elephants inside the PERC would make tourism impossible. Yet, some others mentioned that even if one may or may not be able to get inside the PERC, the fence itself could be marketed and people all over Sri Lanka can be encouraged to come and see the fence and the elephants who, come closer to the fence. They were of the view that the very idea of a PERC is something that can be sold in tourism market.

### **Efficacy of the PERC**

In my area there are about 40 elephants. All of them come down on our gardens. How do you say which one of them is a problem elephant? Do you have a place for these elephants too? (an official, Divisional Secretariat office, Kataragama, 20<sup>th</sup> June 2018).

Several government officials as well as some informants at the grassroots felt that the definition of problem elephants is, in fact, 'problematic'. Some said there are whole herds of elephants, which rampage on farm fields. They felt that if 'problem elephant' is meant to include those who cause damage to crops, then, their number may far exceed the capacity of the PERC. Officials of the DWC explained that 'problem' elephants would mean those who have killed people or those who have the potential to kill. Yet, our informants then asked 'will you have to wait for someone to get killed for you to consider it problem elephant?' They underscored the need for identifying the problem elephants before they actually become problem elephants, which cause loss of lives and that a set of criteria should be developed in that regard.

Many of the informants felt that the officials of the DWC do not have the capacity to control the HEC and this lack of capacity would impact on the implementation of the PERC as well. The officials of the DWC whom we interviewed expressed that they are highly under-resourced and that they risk their lives in the defence of people. They mentioned that sometimes they are not able to respond to emergencies due to shortage of staff and vehicles such as tractors. Incidentally, when this SIA was underway, a ranger from Girandurukotte died of injuries he sustained from an elephant attack when a set of DWC officials attempted to drive away a herd of elephants. They mentioned that although their job is to protect wildlife, practically they have become watchers for chena cultivation and risk their lives.

According to the information gathered through interviews and FGDs with officials and ordinary people, the efficacy of the PERC can be viewed in two ways. Firstly, the great majority of the informants we met were convinced that the PERC could be a means of controlling violent elephants and the design and the structure of the fence would meet this expectation. Secondly, the efficacy of the PERC in resolving the HEC at large could be considered. Addressing the overall HEC would, however, not be possible unless this project becomes one step in a coordinated set of efforts. Existing electric fences in some places have become dysfunctional due to poor maintenance. There are waste dumps in several areas, which attract elephants which also cause damage to crops on their way to the dump. Further, geographically scattered nature of chena cultivation with FD lands and the location of electric fences at the end of the boundary of DWC but not at the end of FD forest make the electric fences ineffective. Therefore, the HEC cannot be addressed merely with the PERC although PERC is a necessary step in the overall process. In fact, officials of the DWC communicated to people at the FGDs that PERC would be one component of a series of projects including village and agro-fencing.

We as officials and villagers have a problem with wildlife officials. People are angry at them. There is always the shortage of Ali wedi. They give only two per person. What can a farmer do with two Ali Wedi? They say there is not enough money (an official, place *[redacted]*, 19<sup>th</sup> June 2018).

Most of the damage by elephants are caused by elephants who live outside of the park. So, your project is not going to solve the issue (Gramaniladari, official, place *[redacted]*, 19<sup>th</sup> June 2018)

The first official above displayed lot of antagonism at the beginning of the meeting and stated that people in his area had enough problems and if problem elephants from other parts were to be brought here, that would only aggravate the situation. However, after the SIA team and officials of DWC and ESCAMP explained the designs, the purpose and security aspects of the PERC, he changed his mind and conveyed his appreciation for the project. However, he underlined the broader issue of lack of trust towards DWC and underscored the need for a broader approach to the problem. The second informant

who is a Gramaniladari argued that the PERC would not address the HEC that people of her village experience because it is the elephants who live in FD lands or those who migrate from Mattala that cause damage to property or crops. She mentioned that she is not against the project but was not convinced that the PERC would address the HEC in her division. Officials of DWC mentioned in the FGDs and interviews that DWC is planning to introduce village fencing (special electric fences to protect vulnerable villages) and agro-fencing (special electric fences to protect farm fields at specific times) as sub-components of the larger programme of protecting both human lives and those of elephants.

20 years ago elephants never came beyond the river. This problem has no single solution. Electric fence is weak. People also cause damage to the fence. There are not enough people to man the fence (Chief Monk, a local temple, place [redacted], 19<sup>th</sup> June 2018).

The monk in this case underlines that fact that changes in land use and deforestation for both agriculture and industrial development has caused the HEC and that the whole issue needs a multi-sectoral and multifaceted approach. He also highlights the shortage of resources for DWC, which aggravates the current HEC. The monk further underscored the need for developing a proper assessment system within DWC to identify and prioritise problem elephants. He mentioned that politicians can manipulate people if, for example, DWC gives priority to elephants from other districts while problem elephants from the vicinity, whatever their level of violence is, cause problems in this region.

### Decision making structures

Some of the officials whom we interviewed maintained a feeling that upper level decision making is done with a top-down approach which ignores the experiences and knowledge of the field officers. At some points, studies like the one in the present, may occur and the grassroots officers are consulted but at the end, they felt, their experiences would nevertheless be not taken seriously by upper level decision makers. According to these officers, if the top leaders within government services and political hierarchy had heeded to their concerns and showed a little bit more sensitivity, the human-elephant conflict could have been handled better. They further mentioned that even in the proposed PERC, the DWC should consult the field officers from the design phase to maintenance of the facility.

### The nature of agriculture and animal husbandry

Agriculture and animal husbandry in the three DS divisions follow inefficient or subsistent patterns. This issue has no direct impact on the proposed PERC but is nevertheless connected with the whole issue of HEC. Although modern agriculture is about the use of technology and increasing efficiency rather than increasing the extent of

land under cultivation, the Chena cultivators are interested in expanding the extent of land under cultivation through encroachment. According to the officials of DWC, FD and DS, and also informants at the grassroots, almost all the chenas are situated in lands belonging to Forest Department and are illegal encroachments. The FD has adopted a lenient approach towards existing chena lands but do not allow any new developments. However, FD does not seem to have the capacity to monitor unauthorised expansion of existing chenas, which are in fact scattered all over the forest. While the grassroots informants mentioned that they have, by and large, encroached about 80% of the FD lands, an official of FD whom we interviewed mentioned that the encroached extent was about 15%. While informants at the grassroots were firm in their assertion that they needed more FD lands for cultivation as the area they live in does not offer alternative sources of livelihoods, almost all the government officials interviewed were firm in their assertion that FD land should not be released for cultivation as it threatened not only wildlife but also aggravated the human elephant conflict.

The scattered spread of the chenas (see the figure xx) also has indirectly compelled the DWC to construct the electric fence at the end of the boundary of DWC, after which one finds lands of FD where the chenas are located. Strangely, at the boundary of the FD lands, one finds the village. According to grassroots officials of DWC, this in fact confuses the elephants which inhabit the FD lands. They face an electric fence when they move in towards the territory of the DWC and hence they turn towards the chenas and of course the villages. Ideally, the electric fence should be constructed at the end of the boundary of the FD, not the DWC, so that, the village is separated from the forest by an electric fence. It does not need to be reiterated that government boundaries do make no sense to elephants. In the past there has been some resistance within the FD as well as the public to the construction of the electric fence by the DWC at the boundary of FD lands due to a perception that ultimately all forest lands would be integrated into DWC. It seems officials of FD do not maintain that initial resistance given the persistent HEC. Yet, chena cultivators we met are still not convinced that the electric fence should be moved closer to the villages.

Large-scale commercial agriculture also contributes to the HEC. For example, certain private sector companies such as NELNA and DOLE, have been given large extent of lands (this could be up to 800 hectares according to informants<sup>5</sup>) which formerly belonged to either Kataragama Maha Devale or the FD. This has caused massive deforestation, changed the land use pattern and interfered with elephant behaviour. These companies employ a separate work force to drive the elephants which come in their way. Elephants driven away by this force seem to turn on the villages and chenas with extra 'vengeance'. Thus, large-scale commercial agriculture in forest lands contribute

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<sup>5</sup> SIA team is not in a position to confirm the exact extent of land under cultivation by large companies although we tried to obtain verification from various informants including officials. Some informants expressed the extent is above 1000 hectares while others mentioned it could be less. Yet, there are clearly expressed grievances that large companies manage to get large extents of land while ordinary people are punished for doing the same.

to aggravating not only the HEC but the sense of social deprivation among the villagers. It is important to note that while problem elephants cause loss of livelihood for some, they generate sources of employment for others. This has become a lucrative industry, which can be threatened in the event the problem of problem elephants is resolved.

Further, the behaviour of the travellers along the main road from Moneragala to Tanamalwila also contributes to the HEC as travellers, including bus conductors, are used to feeding elephants who come to roadside. This has become a pull factor for some elephants, which has become a menace for the public.

### Public perceptions (concerns)

SIA team recorded the public perceptions, which bring out their concerns and grievances communicated to us in the interviews, FGDs and meetings. These perceptions may appear misleadingly simple, illogical and irrelevant, yet, the SIA team recommends that the ESCAMP and DWC take them seriously because what appears as perceptions to outsiders is the reality for those concerned and the latter's behaviour and reactions will be based on 'their' reality. The perceptions, although these can include misunderstanding or lack of understanding, if they are not addressed through effective communication, can be the basis for resistance.

- Threat of escape of elephants; A small minority of informants we met believed that elephants are highly intelligent animals and hence no solid guarantees could be possible about the prevention of escape and potential loss of lives and property. "I feel it is better to take the fence further than 2km. It is uncertain whether the elephants will escape even if the fence is 11 feet in height" (Villager, Sittarama, 18<sup>th</sup> June 2018).
- Impact on other wild life: there was a feeling among the informants that encircling part of the forest containing lakes would limit the water supply for other elephants and animals in general. A few grassroots officials felt that carving out an environmentally rich area and restricting access to it would increase competition among elephants. "elephants are migratory. PERC will cause competition among elephants. So there will have to be habitat enrichment even outside the PERC to solve this issue" (Official, Lunugamwehera, 18<sup>th</sup> June, 2018)
- A local government politician we met mentioned that the quality of construction should be guaranteed and the possibility for corruption should be eliminated as it would lead to poor quality construction of pillars and the overall fence.
- Genetic impact: some informants expressed that the problem elephants are probably the strongest elephants and imprisoning such elephants would mean they would not be able to mate.

- Absence of female elephants would make the male elephants more violent and threaten the villages around.
- Mistrust: it was evidently clear from the field data that there is a low level of trust towards officials of the DWC as a result of the latter's alleged failure in combatting the HEC. Thus, there was a tendency to look at the current project also with some level of mistrust.  
 “we don't have a problem with the project but past attempts have been a failure”  
 (Villager, farmer, Kitulkote, 19<sup>th</sup> June 2018)
- Some public officials alleged that certain lands in their area have been gazetted as DWC lands without their knowledge and accused that this process is arbitrary and causes resource limitations for the public.

## Conclusions

SIA conducted in relation to the Problem Elephant Rehabilitation Center confirms that based on the information communicated to the SIA team and the empirical data gathered in the field from 18-22<sup>nd</sup> June 2018, the proposed PERC does not lead to a negative social impact in the surrounding communities including those adjacent to the Lunugamwehera National Park. The informants we met, including state officials, ordinary villagers, farmers, leaders of CBOs etc are not opposed to the concept of a PERC. Although, in some meetings, at the beginning informants were sceptical and showed some resistance, SIA team could observe that effective dissemination of information changed their attitudes in favour of the project. The proposed PERC seems to have incorporated lessons learnt from the first elephant holding ground in Horowpothana and the second holding ground, in fact, becomes a rehabilitation centre. In terms of technology of construction, designs, and the entire system appears to be an improvement both in an absolute sense and also relative to the EHG in Horowpothana. Therefore, in the view of the SIA team, this project does not interfere with the lives, legal livelihoods, security, and culture of the people concerned. Nevertheless it is very important to note that this conclusion is based on assumption that the PERC would not block any elephant corridors or pathways and DWC should continue to monitor elephant movements even after the project construction.

However, people we interviewed did express certain reservations about the project. This indicates the need to have an effective communication strategy to mobilize the people in favour of the project. Often misunderstanding or misperceptions or previous negative experiences with DWC can possibly push people to develop some sense of scepticism towards the project. But this scepticism can be overcome through effective communication with all stakeholders including key politicians, state officials, and village leaders, religious leaders and ordinary people.

It is important to note that the PERC does have some potential to generate economic gains to the people in the area but this may require further research by ESCAMP or DWC. However, it is important to bear in mind that PERC should be an important step

in a well-planned programme in which PERC is only one component. The whole issue of human elephant conflict requires a broader vision and a plan of action.

However, the SIA highlights that the HEC is a complex issue and hence has no simple answer. It is important to recognize that there are public perceptions, both positive and negative, which needs to be addressed for an effective and smooth implementation of the proposed project. SIA highlights that perceptions are the reality for those holding those perceptions and these needs to be taken seriously. In the section below, we list down the essential steps that ESCAMP and DWC must take in order to make sure that the project does not cause any negative impact and leads to positive economic gains.

## Recommendations

1. Establish an information disseminate unit: effective and full dissemination of information is required according to policies of social safeguards. The experiences of members of the SIA team also confirm this requirement. ESCAMP and DWC need to take the initiative in providing clear and necessary information to the relevant politicians of the central, provincial and local government. This is absolutely necessary to deny space for misinformation and incorrect information. It can be strongly recommended that ESCAMP establishes an information dissemination unit which can be coordinated by an officer with a social science background.
2. SIA team and the officials of DWC and ESCAMP have already disseminated information to the relevant divisional secretaries and their other officers. DWC and ESCAMP need to communicate the proposed PERC with full details to district secretaries and other relevant state officials.
3. DWC needs to establish a post-project monitoring component to make sure that PERC would not impact on elephant pathways and corridors and would not affect elephants who already live closer to the area where the PERC would be built.
4. For effective communication with the people of the area the following steps are recommend.
  - a. Create more awareness among the field officers of DWC about the PERC as officers who directly deal with local community.
  - b. Grassroots meetings: organize grassroots meetings in the villages equipped with photos, a multimedia projector and a white screen to demonstrate the project plans, images of EHG in Horowpothana, structure of the fence and so on. This will make sure that people get a very clear idea of the project
  - c. Meetings with state officials for the same purpose as above
  - d. Meetings with important religious leaders in the area for the same purpose as above

- e. As suggested by one of the informants, organize two separate exposure visits to Horowpothana to convey its safety features, and how PERC will be an improvement from the existing EHG: state officials, including those in DWC should be participants for the first visit. Next, selected representatives from each adjacent village and religious leaders should be taken to visit the EHG in Horowpothana. These exposure visits will help ESCAMP in mobilizing the villagers, state officials, religious leaders, civil society in support of the project.
  - f. In order to guarantee free flow of information and an acceptable grievance mechanism, SIA team recommends construction of several spacious public notice boards with pictures of the fence. These notices could also have contact details and telephone numbers and emails of key personnel whom the public can contact to obtain information or record any grievances if any.
  - g. Assuring ownership: as mentioned by the ordinary grassroots informants themselves, it is important to make sure that people develop a sense of ownership to the PERC. Getting people involved in the project is extremely important for the sustainability of the PERC.
5. Generate economic opportunities for local population: PERC can generate employment opportunities in the preparation of concrete pillars, construction of the fence, maintenance of the fence and habitat management. It can be strongly recommended that people from the area are recruited to undertake these jobs to the extent possible in line with their capacity and skills. The contract documents for building and maintenance should include these suggestions as necessary conditions.
  6. Economic gains: The project may think innovatively to explore possibilities of economic gains to people around the LNP. There were many public queries about the possibilities for improving tourism using the PERC. It is uncertain whether a habitat of problem elephants is suitable for tourism but further research, may disclose whether it is safe for tourists to visit the PERC using the internal service roads. One possibility may be to use reinforced vehicles with better safety to allow some kind of adventure tourism if research by DWC shows that this is really possible. Yet, for the time being, certain improvements can be done to attract more tourists to LNP such as developing a more attractive and visible entrance in Talamawila with a front office.
  7. A monthly coordination meeting between local officials of DWC and FD is recommended. Currently, there does not seem to be much contact or coordination between the two Departments.
  8. SIA recommends ESCAMP to encourage a Community Based Organization (for example, 'Gajamithuro') in each proximate villages to enhance mutual support between the community and DWC.
  9. Finally, although this falls outside of the mandate of the SIA team, the SIA team would like to recommend the adoption of a holistic approach in the longer term: although PERC is a significant step in addressing the issue of problem elephants,

as delineated in the SIA, addressing the whole issue of human-elephant conflict requires a holistic approach, which may, among others, include putting a strong halt on deforestation, capacity building of wild life officials including better training and equipment, strengthening and effective maintenance of existing electric fences, construction of new fences, including village fencing and small scale fencing to protect farm lands, and habitat improvement in places where elephants live.

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