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Report No: 62116-SAS

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF  
SDR 1.4 MILLION  
(US\$2.25 MILLION EQUIVALENT)

TO THE KINGDOM OF BHUTAN

IN SUPPORT OF THE

SECOND PHASE OF THE

ADAPTABLE PROGRAM LENDING (APL) ON  
STRENGTHENING REGIONAL COOPERATION FOR  
WILDLIFE PROTECTION IN ASIA

May 26, 2011

Sustainable Development Department  
South Asia Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective March 25, 2011)

Currency Unit = Ngultrums (Nu)  
Nu 44.755 = US\$1

FISCAL YEAR  
July 1 – June 30

## ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	METT	Management Effectiveness Tracking Tool
APEC	Asia-Pacific Economic Cooperation	MOAF	Ministry of Agriculture and Forests
APL	Adaptable Program Loan	NCB	National Competitive Bidding
ARCS	Audit Report Compliance System	NGOs	Non-Governmental Organizations
ASEAN- WEN	Association of South East Asian Nations – Wildlife Enforcement Network	NTFPs	Non-Timber Forest Products
BAS	Budget and Accounting System	NTRP	National Tiger Recovery Program
CAS	Country Assistance Strategy	OECD	Organization for Economic Cooperation and Development
CBD	Convention on Biological Diversity	OM	Operational Manual
CEPF	Critical Ecosystem Partnership Fund	ORAF	Operational Risk Assessment Framework
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	OSCRC	Operational Steering Committee for Regional Coordination
CQS	Selection based on Consultant Qualification	PA	Protected Area
DA	Designated Account	PAC	Project Audit Committee
DANIDA	Danish International Development Agency	PCU	Project Coordination Unit
DFID	Department for International Development	PD	Project Director
DOFPS	Department of Forest and Park Services	PDO	Project Development Objective
DPA	Department of Public Accounts	PFM	Public Financial Management
EA	Environmental Assessment	PISC	Project Implementation Steering Committee
EMP	Environmental Management Plan	PIU	Project Implementation Unit
ESMF	Environmental and Social Management Framework	PLC	Project Letter of Credit
FA	Financing Agreement	PMU	Project Management Unit
FATF	Financial Action Task Force	PO	Procurement Office
FIC	Financing Item Code	PPA	Public Procurement Act
FIU	Field Implementation Unit	PPR	Public Procurement Rules
FM	Financial Management	PRMP	Procurement Risk Mitigation Plan
FMR	Financial Monitoring Report	QBS	Qualification Based Selection
FMS	Financial Management Specialist	QCBS	Quality and Cost Based Selection
FRR	Financial Rules & Regulations	RAA	Royal Audit Authority
GBFA	Government Budget Fund Account	RFP	Request for Proposal
GDP	Gross Domestic Product	RGOB	Royal Government of Bhutan
GEF	Global Environmental Facility	ROSC	Regional Operational Steering Committee

GIS	Geographic Information System	RPRC	Regional Proposal Review Committee
GOB	Government of Bangladesh	RPSC	Regional Policy Steering Committee
GON	Government of Nepal	SAARC	South Asia Association for Regional Cooperation
GRF	Government Reserve Forest	SACEP	South Asia Cooperative Environment Programme
GSP	Global Support Program	SADC	Southern African Development Community
GTI	Global Tiger Initiative	SAWEN	South Asian Wildlife Enforcement Network
GTRP	Global Tiger Recovery Program	SAWTI	South Asia Wildlife Trade Initiative
HEC	Human-Elephant Conflict	SBD	Standard Bidding Document
HWC	Human-Wildlife Conflict	SGI	Smart Green Infrastructure
ICB	International Competitive Bidding	SIA	Social Impact Assessment
ICCWC	International Consortium on Combating Wildlife Crime	SOE	Statement of Expenses
ICDP	Integrated Conservation and Development Project	SSS	Single Source Selection
ICT	Information and Communication Technology	TA	Technical Assistance
IDA	International Development Association	THC	Tiger-Human Conflict
INTERPOL	International Criminal Police Organization	TOR	Terms of Reference
IP	Indigenous People	TRAFFIC	The Wildlife Trade Monitoring Network
IPDP	Indigenous People Development Plan	UNEP	United Nations Environmental Program
IPR	Implementation Progress Report	UNODC	United Nations Office of Drugs and Crime
ISN	Interim Strategy Note	USFWS	United States Fish and Wildlife Service
IUCN	International Union for the Conservation of Nature	VRCE	Virtual Regional Center of Excellence
IUFRs	Interim Un-Audited Financial Reports	WCD	Wildlife Conservation Division
IWT	Illegal Wildlife Trade	WCF	Wildlife Conservation Fund
LCS	Least Cost Selection	WCS	Wildlife Conservation Society
LIB	Limited International Bidding	WTO	World Trade Organization
M&E	Monitoring and Evaluation	WWF	World Wildlife Fund
MDGs	Millennium Development Goals		

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## PAD DATA SHEET

### BHUTAN: Second Phase of the Adaptable Program Lending (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia

#### PROJECT APPRAISAL DOCUMENT

South Asia Region  
South Asia Environment, Water Resources and Climate

Date: May 25, 2011 Regional Integration Director: Salman Zaheer Country Director: Nicholas J. Krafft Sector Director: John Henry Stein Sector Manager: Herbert Acquay Task Team Leader (TTL): Sumith Pilapitiya Co-TTL: Marinela Dado Project ID: P126193 Lending Instrument: Adaptable Program Loan (APL)	Sector(s): Gen agr/fish/for sec (70%); Gen pub admin sector (30%) Theme(s): Biodiversity (80%); Environmental policies and institutions (10%); Other trade and integration (10%). EA Category: B
<b>Project Financing Data:</b>	
Proposed terms:	
<input type="checkbox"/> Loan <input checked="" type="checkbox"/> Credit <input type="checkbox"/> Grant <input type="checkbox"/> Guarantee <input type="checkbox"/> Other:	
Source	Total Amount (US\$M)
Total Project Cost:	
Cofinancing:	
Borrower	
Total Bank Financing:	2.25
IBRD	
IDA	2.25
New	2.25
Recommitted	
Borrower: Kingdom of Bhutan	
Responsible Agency: Ministry of Agriculture and Forests	
Contact Person:	
Mr. Sonam Wangchuk	
Chief Forest Officer	
Wildlife Conservation Division	
Department of Forest and Park Services	
Ministry of Agriculture and Forests	
Post Box 252	
Thimphu, Bhutan	
Tel. 975-2-324131/325042; Fax 975-2-335806	
E-mail: sonamwangchuck@gmail.com	

Estimated Disbursements (Bank FY/US\$)						
FY	2012	2013	2014	2015	2016	
Annual	417,272	768,202	586,803	343,272	134,451	
Cumulative	417,272	1,185,474	1,772,277	2,115,549	2,250,000	
Project implementation period: November 2011 to February 2016						
Expected effectiveness date: November 2011						
Expected closing date: August 31, 2016						
Does the project depart from the CAS in content or other significant respects?					<input type="radio"/> Yes <input checked="" type="radio"/> No	
If yes, please explain:						
Does the project require any exceptions from Bank policies?					<input type="radio"/> Yes <input checked="" type="radio"/> No	
Have these been approved/endorsed as appropriate by Bank management?					<input checked="" type="radio"/> Yes <input type="radio"/> No	
Is approval for any policy exception sought from the Board?					<input type="radio"/> Yes <input checked="" type="radio"/> No	
If yes, please explain:						
Does the project meet the Regional criteria for readiness for implementation?					<input checked="" type="radio"/> Yes <input type="radio"/> No	
If no, please explain:						
<b>Project Development Objective (PDO):</b>						
To assist the participating governments of Bhutan and others to build or enhance shared capacity, institutions, knowledge and incentives to collaborate in tackling illegal wildlife trade and other selected regional conservation threats to habitats in border areas.						
Project description [ <i>one-sentence summary of each component</i> ]						
Component 1: Capacity building for addressing the illegal trans-boundary wildlife trade						
Component 2: Promoting wildlife conservation in South Asia						
Component 3: Project coordination and communication						
Safeguard policies triggered?						
Environmental Assessment (OP/BP 4.01)					<input checked="" type="radio"/> Yes <input type="radio"/> No	
Natural Habitats (OP/BP 4.04)					<input checked="" type="radio"/> Yes <input type="radio"/> No	
Forests (OP/BP 4.36)					<input checked="" type="radio"/> Yes <input type="radio"/> No	
Pest Management (OP 4.09)					<input type="radio"/> Yes <input checked="" type="radio"/> No	
Physical Cultural Resources (OP/BP 4.11)					<input type="radio"/> Yes <input checked="" type="radio"/> No	
Indigenous Peoples (OP/BP 4.10)					<input type="radio"/> Yes <input checked="" type="radio"/> No	
Involuntary Resettlement (OP/BP 4.12)					<input checked="" type="radio"/> Yes <input type="radio"/> No	
Safety of Dams (OP/BP 4.37)					<input type="radio"/> Yes <input checked="" type="radio"/> No	
Projects on International Waters (OP/BP 7.50)					<input type="radio"/> Yes <input checked="" type="radio"/> No	
Projects in Disputed Areas (OP/BP 7.60)					<input type="radio"/> Yes <input checked="" type="radio"/> No	

<b>Conditions and Legal Covenants:</b>		
<b>Financing Agreement (FA) Reference</b>	<b>Description of Condition/Covenant</b>	<b>Date Due</b>
Schedule 2, Section I. A, Paragraph 1	Establishment of Project Implementation Steering Committee	July 15, 2011
Schedule 2, Section I.B	Application of January 2011 version of the Anti-Corruption Guidelines set forth in the FA	Throughout implementation
Schedule 2, Section I. C, Paragraph 1 (a) and Paragraph 1 (b)	Implementation of project will not involve involuntary resettlement; Resettlement Action Plan (RAP) required prior to commencement of works	Throughout implementation
Schedule 2, Section I. C, Paragraph 2	Application of Environmental and Social Management Framework (ESMF)	Throughout implementation
Schedule 2, Section I. C, Paragraph 3 and 4	Conducting Environmental Assessments (EAs), Social Impact Assessments; (SIAs); application of Environmental Management Plans (EMPs), RAP and Resettlement Policy Framework (RFP); submission to IDA of EMP, RAP and RFP for review and application of modification or waiver after agreement of IDA	Throughout implementation
Schedule 2, Section II. A	Project reporting in accordance with the provisions of Section 4.08 of the General Conditions	Throughout implementation
Schedule 2, Section II. B, Paragraph 1	Maintenance of financial management system	Throughout implementation
Schedule 2, Section II. B, Paragraph 2	Submission of quarterly interim unaudited financial reports – to IDA no later than 45 days after the end of each calendar quarter;	Throughout implementation
Schedule 2, Section II. B, Paragraph 3	External audit of financial statements for the period of one fiscal year; submission of audited financial statements to IDA no later than six months after the end of each fiscal year	Throughout implementation
Schedule 2, Section III. A, B and C	Procurement methods	Throughout implementation
Schedule 2, Section III. D	Prior review of contracts specified in the Procurement Plan; post review of all other contracts	Throughout implementation

Schedule 2, Section IV. A	Withdrawal of proceeds of IDA financing in accordance with Article II of the General Conditions, Section IV and	Throughout implementation
	Additional IDA instructions to finance eligible expenditures set forth in the table in Section IV. A	Throughout implementation
Schedule 2, Section IV. B Paragraph 1	Adoption of Operational Manual for Category 2 Expenditures	Condition of disbursement
Schedule 2, Section IV. B, Paragraphs 1 and 2	Other withdrawal conditions and Closing Date	As provided in FA



## I. Strategic Context

### A. Global, Regional and Country Context

1. South Asia is home to 13-15% of the world's biodiversity and hosts some of the most charismatic and endangered species on Earth. India's Gir forests are the last refuge of the world's remaining 250-300 Asiatic wild lions. Habitats across Bhutan – as well as Bangladesh, India and Nepal – are home to over 65% of the 3,000 or so remaining wild tigers. The Himalayas (comprising numerous countries, including Bhutan) is a biodiversity hotspot and the last redoubt of the critically endangered snow leopard whose numbers are unknown.<sup>1</sup> Besides the tiger and snow leopard, Bhutan's charismatic species include the elephant, Himalayan black bear, takin, red panda, white bellied heron and the black-necked crane.

2. Wildlife and natural protected areas are among Bhutan's greatest assets. They represent not only a vast repository of biodiversity but also reflect the country's commitment to maximizing Gross National Happiness. GNH is the philosophy which forms the cornerstone of Bhutan's development and which the country is implementing successfully.<sup>2</sup> Centuries of isolationism, a small population and topographical extremes helped maintain one of the most intact ecosystems in the world. The country entered the current millennium with much of its natural environment and biodiversity in pristine state. Bhutan ranks among the world's top ten countries in terms of species density (i.e. the number of species per unit area). Despite being a small country, it is home to 5,603 species of vascular plants, 677 species of birds and nearly 200 species of mammals. The country has a strong track record of environmental stewardship. Environmental conservation is featured explicitly in Bhutan's constitution which prescribes the maintenance of a minimum of 60% of the country's total land area under forest cover perpetually. As a landlocked and mountainous country and a global biodiversity hotspot, Bhutan's future development prospects depend upon capitalizing on its comparative advantage – its natural endowment. With an economy highly dependent on the sustainability of its natural resources, a balanced approach to development with considerable investment in natural capital to ensure its comparative advantage would be appropriate.

3. The charismatic appeal of many species can generate additional economic benefits from conservation. Ecotourism is globally the fastest growing and most profitable segment of the tourist industry.<sup>3</sup> Estimates suggest that the tourism revenues from habitats rich in biodiversity – though still under-priced and far below potential – run into significant sums and contribute significantly to livelihoods of the poorest. For example, the net present value of benefits from

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<sup>1</sup> The mega-diverse countries are a group of countries in which less than the 10% of the global land surface has more than 70% of the land's biodiversity. Most of these countries are located in the tropics. A biodiversity hotspot is a bio-region with a significant reservoir of diversity that is under threat from humans. It was first defined by Norman Myers in an article in "The Environmentalist" (1988) based on clearly specified criteria.

<sup>2</sup> GNH was introduced by the fourth King of Bhutan in the 1970s. GNH presents an alternative model for development which places equal weight on the social, spiritual, intellectual, cultural and emotional needs of a society as it does on material and economic gain.

<sup>3</sup><http://www.ecotourism.org/atf/cf/%7B82a87c8d-0b56-4149-8b0a-c4aaced1cd38%7D/TIES%20GLOBAL%20ECOTOURISM%20FACT%20SHEET.PDF>

ecotourism generated by India's forests is estimated at US\$636 million.<sup>4</sup> This figure underestimates the potential value of undisturbed natural habitats because it excludes other benefits that forests bring. They include timber, fodder, traditional medicines, bio-prospectivity (e.g. new medicines), non-timber forest products (NTFPs) and watershed benefits, among others, as well as non-use (preservation) values. Aside from timber, most of the benefits from forest resources accrue to the poor and account for more than 50% of their consumption.<sup>5</sup> With 69% of the Bhutanese population living in the rural areas, forests serve as a valuable source of subsistence livelihood, helping to supplement inputs of fuel, food and medicine. Also, the majority of Bhutan's population is dependent on non-timber forest products.<sup>6</sup> Therefore, for any of the region's countries, the addition of non-tourism benefits from forests would bring the total estimated economic contributions into the high billions of dollars.<sup>7</sup>

4. A number of global treaties have been established in recognition of the importance of preserving biological diversity. They include the Convention on Biological Diversity (CBD, 1992), Convention on International Trade in Endangered Species (CITES, 1981) and Convention on Wetlands (RAMSAR, 1971). International institutions, such as the United Nations Environmental Program (UNEP), International Union for the Conservation of Nature (IUCN), Global Environmental Facility (GEF), and a number of non-governmental organizations (NGOs) help countries address environmental issues. Bhutan, like most countries of the world, is a signatory to these international treaties and it has adopted legislation and created institutions for the protection of wildlife and their habitats.

5. A top global priority regarding species conservation is that of the wild tiger. Tigers symbolize the plight of biodiversity and their reduction in numbers indicates ecosystems under stress. Today, they occupy only 7% of their historic range. Recognizing the need to bolster commitment to tiger conservation, the World Bank, along with the Smithsonian Institution, established the Global Tiger Initiative (GTI) in 2009. The effective protection of tigers is vital to the conservation of many other rare and threatened species as well as to sustaining essential ecosystem services. Most tiger populations are isolated and small (numbering fewer than 30) and are found in 13 Tiger Range Countries (TRCs).<sup>8</sup> TRCs are participating in tiger recovery efforts spearheaded through GTI and the Global Tiger Recovery Program (GTRP) adopted at the 2010 International Tiger Forum in St. Petersburg, Russia. GTRP is built on the foundation of the National Tiger Recovery Programs (NTRPs). Bhutan has a potentially viable population of tigers that can serve as a vital gene pool for future tiger conservation efforts. Intriguingly, in Bhutan, the tiger, which is generally associated with sub-tropical and tropical habitats, has been found at elevations up to 4,000 meters.

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<sup>4</sup> Gundimenda H, S. Sanyal, R Sinha and P Sukhdev, 2009, *The Value of Biodiversity in India's Forests*, Deutsche Bank. The valuation study estimated the net present value of benefits from ecotourism at INR 65,192 (US\$1,350) for each hectare of dense forest in India. It is estimated that India has 390,000 hectares of dense forest.

<sup>5</sup> See for example Gundimenda *et al* (*op cit*) and also Gundimenda H, S. Sanyal, R Sinha and P Sukhdev, 2009, *The Value of Timber and Non Timber Forest Products in India's Forests*, Deutsche Bank

<sup>6</sup> Renewable Natural Resources Statistics 2000, Volume 1, Ministry of Agriculture, Royal Government of Bhutan: Thimphu.

<sup>7</sup> More refined calculations are still in progress. The contributions by forests include livelihood benefits as well as the benefits that accrue from conservation (which is a pure public good).

<sup>8</sup> The TRCs include Bangladesh, Bhutan, India, Nepal in South Asia; Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Thailand and Vietnam in East Asia; and Russia.

## B. Sectoral and Institutional Context

6. Governments in Asia are keenly aware of the benefits from biodiversity and the risks of biodiversity loss. Asian countries have been among the world's leaders in adopting legislation for the protection of endangered species and their habitats and ratifying international conventions for conservation. South Asia, especially India, is a center of cutting-edge research on natural resource management and habitat conservation. With its strong environmental track record, Bhutan is considered a conservation centerpiece of the Eastern Himalayas. While Asian countries have devoted substantial resources to habitat conservation and, more recently, to enforcement of anti-poaching legislation, they face daunting challenges that are growing more severe.<sup>9</sup> Habitat fragmentation and poaching for illegal wildlife trade are the most significant threats to biodiversity.

7. *Habitat degradation.* Not only do many of the high profile endangered species (such as the top predators and elephants) require large amounts of land, but their habitats need to be connected as well to assure long-term genetic survival. Through much of South Asia, the forest frontier has largely stabilized as a result of past large scale conversions of habitats (though there are notable exceptions in the conflict-prone and forested mineral and plantation belts). Approximately 4% of South Asia's land area has been granted Protected Area (PA) status which confers varying degrees of legal and actual sanctuary to wildlife.<sup>10</sup> In Bhutan, over 51% of its land area is designated as park or other PA category. In addition, Bhutan has taken several initiatives to augment its efforts to conserve biodiversity, such as linking all PAs through biological corridors, creating conservation areas outside the PA network and implementing programs to conserve flagship species. However, the legal sanction of PA status in the region does not guarantee full sanctuary from intrusive activities (e.g., new roads) and development (expanding settlements). As a result, many endangered species subsist in isolated population clusters. Small, fragmented breeding populations are especially fragile and at risk of genetic bottlenecks, a condition that reduces their capacity to adapt to changing conditions.<sup>11</sup>

8. *Poaching and illegal trade.* While habitat fragmentation is a severe problem, it remains a medium-term threat. The most serious and immediate risk for many species is poaching for wildlife trade. Poaching techniques can be extremely gruesome. The most egregious and cruel methods include skinning or de-horning of live animals and transporting live creatures in inhumane conditions. Poaching has become so intense that tigers have disappeared from many parks throughout Asia. Nowhere has the impact been greater than in India and Nepal which remain the bastions of tiger conservation. While Bhutan's relatively intact PA system as a whole has faced relatively lesser threat from wide-scale land use conversion (due to population pressure and/or industrialization), the country's natural assets have become endangered in recent years

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<sup>9</sup> For example, India has more than doubled the budget available for wildlife protection from about US\$15.3 million in 2008-09 to about US\$38 million in 2009-2010. India Today, July 6, 2009.

<sup>10</sup> The level of protection accorded legally and in practice varies considerably. In Bhutan, large tracts of land in PAs contain farms, houses, a growing number of roads, logging and small industry. In India, however, the land under PA management is small (about 4.8%) and most forms of anthropogenic interference and commerce are legally discouraged from these areas.

<sup>11</sup> Science suggests: "It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one most adaptable to change." Charles Dariwin, 1859, *The Origin of Species*.

due to poaching for illegal wildlife trade. Wildlife poaching and trade are especially prevalent along the remote borders and within certain interior areas of Bhutan.

9. With South Asia's rich biodiversity, wildlife is a lucrative target of the illegal trade.<sup>12</sup> The economic value of the illegal wildlife trade is determined primarily by cross-border factors. Wildlife are poached in one country, stockpiled in another, and then traded beyond the South Asia region. The primary market for many of these products is outside South Asia – often in East Asia – for items of presumed pharmacological utility. The trade is controlled by criminal organizations with considerable power over the market and the prices paid to poachers and carriers render the control of the trade even more challenging. The UN Office of Drugs and Crime (UNODC) suggest that wildlife traders have links to other organized criminal activities (e.g. narcotics), presumably a reflection of the increasing returns to cross-border illegal activities. By contrast, poaching is often carried out by local or forest dwelling populations who receive only a fraction of the final price of the product. Hence, the magnitude and complexity of the problems frequently transcend national boundaries.<sup>13</sup> Bhutan has several species of wild animals and plants of great commercial value in the international market, especially for use in the production of traditional oriental medicines. The country's porous international borders in both the north and south, inadequate law enforcement personnel and the general lack of knowledge of the legal consequences of poaching have made it difficult to control poaching.

10. Due to the clandestine nature of the enterprise, reliable estimates of the composition, volume and value of the trade remain elusive. The International Criminal Police Organization (INTERPOL) has estimated (albeit, imprecisely) that the global value of the illegal wildlife trade exceeds US\$20 billion annually and ranks third after narcotics and illegal weapons trade.

11. Lack of consistency in the enforcement of controls remains one of the region's greatest problems. Nepal has emerged as the staging post for trafficking of illegal wildlife commodities destined for consumption in East China, so success in tackling the problem will remain elusive unless more effective controls are established in Nepal with corresponding efforts in India. Bhutan has porous borders with both India and China, facilitating the transport of wildlife parts and products across borders. At present, there is no legislation in Bhutan to allow law enforcement agencies to check and apprehend foreign traders. The problem is compounded by the lack of trained staff across the entire spectrum of the trade chain from a shortage of effective anti-poaching patrolling to a dearth of legal, investigative and interdiction capacity at borders and within countries. Attempts to plug the gaps and to deliver assistance tend to be ad hoc, and often are not harmonized or well-structured, nor properly evaluated. And even where cross-border protocols have been established, they are typically not observed.

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<sup>12</sup> Victims of the trade are many and varied and include the iconic tiger and elephant, snow leopard, common leopard, one-horn rhino, pangolin, brown bear, several species of deer and reptiles, seahorses, star tortoises, butterflies, peacocks, hornbills, parrots, parakeets and birds of prey, and corals.

<sup>13</sup> Technically, this market structure is complex and poses regulatory challenges. The market resembles an inverted wine glass. A large number of potential poachers (forest dwellers) operate under quasi open access conditions. The poached commodity is then sold to traders – the organized gangs – who are few in number and thus operate under oligopolistic conditions (i.e. have market control) and the product is sold via retailers to a large number of consumers. Where controls are optimally applied to cause the greatest disruption is not obvious – given the imperfectly competitive “middle”. See Bulte E. H. and R. Damania, 2006, “The Wildlife Trade”, *Ecological Economics*.

12. It is clear that no single country – acting alone – can eliminate the perils to Asia's wildlife resources. Close collaboration is needed among nations in South and South East Asia along the trade route as well as the centers of consumption (e.g., East Asia and North America).<sup>14</sup> Bhutan demonstrates its commitment to the pursuit of collaborative responses. It is a partner to regional initiatives, such as the South Asia Cooperative Environment Programme (SACEP), South Asia Wildlife Trade Initiative (SAWTI), South Asian Association for Regional Cooperation (SAARC) Convention on Cooperation on Environment. In May 2010, countries in South Asia agreed at the First Meeting on Illegal Wildlife Trade in South Asia held in Kathmandu to develop institutional mechanisms for harmonizing and collaborating against common threats, including the creation of the South Asia Wildlife Enforcement Network (SAWEN). However, many of these organizations are not resourced adequately to implement activities.

13. *Rationale for IDA involvement.* The World Bank – specifically, IDA – has supported numerous activities, including several investment loans in Asian countries to support natural resource management and habitat conservation. IDA is well placed to engage on this issue as it is one of the few agencies with operations in all key countries in South and South East Asia. These combined resources give IDA a role to play in helping to develop and support a regional initiative to tackle the illegal trade in wildlife and biodiversity conservation. The regional project is aimed at addressing an environmental externality of global significance. With regard to the proposed second phase of the regional project, environmental stewardship is a cross-cutting theme of the Country Partnership Strategy (CPS) for Bhutan for FY11-14.<sup>15</sup>

### **C. Higher Level Objectives to which the Project Contributes**

14. The core issue to be addressed by the project is the mitigation of a regional public “bad” (illegal wildlife trade across borders) as the supply of wildlife “goods” are sourced from across South Asia (Bangladesh, Bhutan, India and Nepal) and South East Asia (Laos and Vietnam). The threat of illegal wildlife trade is highest in border straddling areas. With an initial focus on border habitats, the proposed second phase of the project to be implemented in and by Bhutan would lead to harmonized enforcement standards, develop best practice applications, share successful schemes and conduct knowledge/research across the “supply” region. They represent the only viable measures for substantially and comprehensively reducing illegal wildlife trade.

15. On the demand side, the economic value of this trade is determined primarily by the cross-border trade which, in large measure, is channeled via various regional countries and then transported out of the region.<sup>16</sup> Uniformity in the enforcement of controls on illegal poaching or trade is an essential component for combating the illicit practices.

16. Accordingly, the higher level objective to which the various phases of the regional

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<sup>14</sup> Numerous NGOs focus on demand side management and, through the GTI, the Bank is engaging on this issue. The communications component of this project offers an opportunity to address some of these complex issues.

<sup>15</sup> The regional project is aligned with the broad sustainability priorities of IDA’s Country Assistance Strategies (CASs) for Asian countries (Section III. B, paragraph 1).

<sup>16</sup> Sources of demand are largely outside South Asia and beyond the scope of the project, though it is envisaged that there would need to be close collaboration with organizations that do address this issue (e.g. TRAFFIC).

project contributes is to improve the effectiveness of wildlife and habitat conservation in the countries participating in the regional project by addressing key regional threats, such as wildlife trade and habitat management in critical boundary areas.

17. Geographically, the inter-connectedness of habitats and ecosystems among the countries participating in the regional project is well-known: Bhutan and India in the Eastern Himalayas; Nepal and India in the Tarai region; and India and Bangladesh in the Sundarbans. Any activity in Bhutan's habitats will have repercussions across its borders and vice versa. Therefore, wildlife management and habitat conservation efforts need to be coordinated between Bhutan and its neighbors to ensure that no actions in one country are detrimental to the others.

18. Research efforts are fragmented with limited scientific collaboration or exchange across borders and even within countries. A formal mechanism for knowledge sharing and scientific partnerships within Asia is absent. Such mechanism would provide opportunities for strengthening links among the Asian countries as well as with world-class institutions for managing connected PAs and tracking animal populations across borders. A knowledge and capacity building partnership that also addresses the trans-border dimension would build complementarities and generate benefits in the form of shared knowledge and perspectives. Applying knowledge in practice to develop and validate techniques – appropriate to Bhutan as a country – will be essential in a regional approach.

19. Like the first phase of the regional project, the proposed second phase in Bhutan would build on ongoing regional initiatives and on SAWEN. The May 2010 South Asia meeting was a turning point as countries forged their commitment as a region to support wildlife protection and conservation. The modalities of the SAWEN agreement and ensuing legal structures were agreed in principle at the SAWEN inaugural meeting in Bhutan in January 2011.<sup>17</sup> Moreover, Bhutan (along with Bangladesh and Nepal) is enhancing its collaboration with global efforts through existing organizations, such as CITES, TRAFFIC,<sup>18</sup> INTERPOL and the International Consortium on Combating Wildlife Crime (ICWC).<sup>19</sup> The second phase is aligned with the conservation priorities supported by GTI and the priority actions under Bhutan's NTRP. Current estimates are that Bhutan has between 115 and 150 tigers of which 70-80 are adults.

## **II. Project Development Objectives**

### **A. PDO**

20. The long-term vision of the regional program is to stabilize and, if possible, increase the population and habitats of critically endangered animals in Asia. Since wildlife and habitats cross administrative boundaries and because knowledge and capacity vary widely across and

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<sup>17</sup> At that meeting, it was decided that the SAWEN Secretariat will be located in Kathmandu, Nepal.

<sup>18</sup> TRAFFIC is the global wildlife trade monitoring network.

<sup>19</sup> Others include the United States Fish and Wildlife Service (USFWS), World Wildlife Fund (WWF), UNODC, Association of South East Asian Nations–Wildlife Enforcement Network (ASEAN-WEN). ICCWC was established at the St. Petersburg Tiger Summit in November 2010 by the heads of CITES, INTERPOL, UNODC, World Customs Organization (WCO) and the World Bank.

within countries, a regional approach is needed to address cross-border issues, build synergies, share skills, knowledge and experiences and build regional collaboration for the conservation of critical habitats and ecosystems.

21. The project development objective (PDO) is **to assist the participating governments of Bhutan and others to build or enhance shared capacity, institutions, knowledge and incentives to collaborate in tackling illegal wildlife trade and other selected regional conservation threats to habitats in border areas.** The project will focus on a selected set of country-specific initiatives as well as key mutually agreed regional activities that are crucial to attaining the regional strategic goals.

## **B. Project Beneficiaries**

22. The proposed second phase aims to contribute to a global public good (conservation of endangered species) by addressing its inverse, a global public bad (illegal wildlife trade). It is clear that when the project objectives are met, global benefits will be generated. Also, Bhutan will benefit through more effective utilization of its budget on wildlife crime enforcement and, insofar as there are presumed links between wildlife crime and other criminal activities, there would be additional benefits from the interdiction of other global crimes. However, the global public good aspect makes it inherently difficult to quantify all the benefits from undertaking the regional project, including the proposed second phase.<sup>20</sup>

23. Since the second phase includes enhancements to wildlife management and knowledge for Bhutan, the country's stock of natural capital would increase. Recent economic analysis by the World Bank demonstrates that increases in natural capital are vital for fueling sustainable increases in national wealth, again suggesting the scope for national benefits.<sup>21</sup> In addition, since many of Bhutan's rural poor rely on these natural resources for their livelihoods, increasing natural capital productivity would have positive development outcomes too.

## **C. PDO Level Results Indicators**

### **Key Performance Indicators**

24. Progress towards the development of regional interventions for addressing illegal wildlife trade and other conservation threats would be demonstrated with the following indicators:

- Progress towards the development of sustainable regional mechanisms for addressing illegal wildlife trade and other conservation threats
- Development of at least one protocol each on a common research agenda, knowledge sharing, collaboration and division of labor

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<sup>20</sup> A pure public good is defined as a commodity that is non rival in consumption – i.e., many can consume it simultaneously (e.g., clean air or conservation). And it is non excludable. Once provided, one cannot feasibly restrict who benefits since the entire globe benefits from clean air or a rare species being conserved in its natural habitat. Thus, identifying beneficiaries in this context is at best only a partial exercise.

<sup>21</sup> World Bank. 2006, *Where is the Wealth of Nations: Measuring Capital for the 21<sup>st</sup> Century*, Washington DC.

- Agreement among the enforcement agencies on at least two regional protocols, including approaches and solutions
- Implementation of at least three regional pilots or initiatives in wildlife enforcement and conservation
- Improvement of Bhutan's capacity to fight wildlife crime through the development of information/intelligence networks and to boost conservation through better PA management and training to staff in the relevant agency

### III. Project Description

25. The regional project applies a two-pronged approach: (i) capacity building to address the illegal wildlife trade through regional cooperation; and (ii) habitat protection and management to generate regional conservation benefits by ensuring the conservation of endangered and flagship species, including the tiger, snow leopard, rhinoceros, elephant, Himalayan black bear, pigmy hog and red panda in increasingly fragmented habitats and addressing the human-wildlife conflict. The interventions would enhance the capacity of Bhutan's Wildlife Conservation Division (WCD) in the Department of Forests and Park Services (DOFPS) of the Ministry of Agriculture and Forests (MOAF) to carry out conservation based on a landscape approach and also to address wildlife trafficking. The landscape approach would lead to improved management of the PAs and Government Reserve Forests (GRFs) – that are essential to the long-term conservation of the tiger and other flagship endangered species – and would control against the adverse impacts of the illegal trade. Bhutan is a world leader in attempting to use forest corridors to create a durable network of PAs. However, the corridors that came under legal protection eleven years ago are not yet fully operating as conservation corridors. Since flagship species require vast contiguous habitats for effective, long-term conservation, operationalizing these corridors to ensure landscape level connectivity is essential for the survival of flagship species. It is critical that these species are managed effectively not only in the designated PAs within Bhutan but also along the corridors to ensure the connectivity of ecosystems across national boundaries. Conservation of Asia's flagship species would lead to improved natural habitats for all species and, ultimately, healthy ecosystems for South and South East Asia.

26. Bhutan continues to benefit from significant donor support for its efforts in biodiversity conservation and wildlife protection. Annex 2 (paragraph 2) presents the details of such donor support. Unlike the first phase of the adaptable program loan (APL) where implementation of specific project components would be carried out in a sequential manner (i.e., capacity building followed by investments in conservation), the proposed project in Bhutan would carry out both capacity building of WCD and investments in conservation upon effectiveness.

27. Bhutan's participation represents the second phase of the regional project with Bangladesh and Nepal in the first phase. India may participate in the regional project. At the November 2010 meeting of conservation officials from Bangladesh, Bhutan, India and Nepal, the participants discussed the project's regional issues and agreed to adopt specific mechanisms for collaboration in addressing the threats to wildlife and habitats. Indeed, the officials committed to join the Regional Policy Steering Committee (a regional governance structure



under the project) for ensuring regional coordination as soon as the Committee is established.

## **A. Project Components**

### **Component 1: Capacity building for addressing the illegal trans-boundary wildlife trade (US\$80,500)<sup>22</sup>**

28. Component 1 aims to bring about regional harmonization and collaboration in combating wildlife crime through strengthened legislative and regulatory frameworks, well-equipped specialized agencies and systems, as well as relevant training and awareness programs for staff across the range of agencies that contribute to the enforcement of wildlife laws and regulations. Since capacity building of DOFPS is supported by other donor agencies and programs, Bhutan will rely largely on the capacity developed under externally funded programs. It is anticipated that, collectively, the activities would generate well coordinated frameworks, systems, technology, infrastructure and expertise in Bhutan.

29. *Sub-component 1.1 Institutional strengthening in wildlife conservation and illegal wildlife trade control* (US\$61,500) would support strengthening of the information/intelligence network that will contribute towards improved enforcement and control of illegal wildlife trade. This activity will complement the ongoing and proposed capacity building programs supported by other development partners, such as WWF, and they will strengthen DOFPS's effectiveness in wildlife conservation and illegal wildlife trade control.

30. *Sub-component 1.2 Staff capacity building and training toward regional collaboration* (about US\$19,000) would support: (i) training and workshops in strengthened enforcement for DOFPS's field staff; and (ii) improving trans-boundary coordination. These activities will benefit from TRAFFIC's recommendations on new ways to enhance the ability to combat illegal wildlife trade and strengthen conservation and PA management.<sup>23</sup>

### **Component 2: Promoting wildlife conservation in Asia (US\$2.017 million)**

31. *Sub-component 2.1: Virtual Regional Center of Excellence (VRCE) for wildlife conservation* (US\$14,250) seeks to fill crucial knowledge and information gaps in addressing regional threats to conservation. It entails the creation of VRCE that would include a network of scientists and practitioners whose mission would be to expand the scope and quality of research in wildlife conservation needed to develop a common response against illegal wildlife trade in and outside the region and to address other regional conservation and landscape level issues to be agreed by the participating countries.<sup>24</sup> For all participating countries to benefit from knowledge

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<sup>22</sup> Figures exclude contingency.

<sup>23</sup> These may include establishing a focal point within each agency or national multi-agency task forces as well as conducting cross-country, multiple agency training to bolster intra-agency cooperation. ICCWC may be able to contribute to the implementation of this sub-component. TRAFFIC's mission is to deliver innovative and practical conservation solutions and it develops and organizes training and other capacity-building initiatives for officials involved in the regulation of wildlife trade.

<sup>24</sup> Knowledge generation and research within the VRCE would focus primarily on conservation and species management research. Better management of PAs, species and stronger conservation would enable the

sharing efforts, VRCE could sponsor the creation of a local networking forum in each country to facilitate exchange of research information, collaboration and coordination of country level institutions involved in wildlife conservation research. Coordination of the forum in Bhutan would be facilitated by WCD.

32. VRCE would provide the first (and only) coordinated, institutional response for research and knowledge dissemination on wildlife conservation in South Asia with possible links to analogous efforts in East Asia.<sup>25</sup> The exclusive focus will be on either promoting a conservation-related regional public good or addressing a regional public bad. Given the existence of national institutions with expertise in this area already, it is critical for VRCE to bring value-added and not duplicate existing efforts. By playing the role of coordinator and facilitator of knowledge and expertise, VRCE could become a vehicle for promoting dialogue and good practices as well as disseminating knowledge. Because VRCE will be virtual and will have no central physical facility, it will rely heavily on state-of-the-art information and telecommunication technology (ICT) to conduct its business and to attain its objectives. A Regional Operational Steering Committee (ROSC) – described in Section IV – would assist in the development of VRCE’s overall program and objectives.<sup>26</sup>

33. VRCE would build on existing regional and global environmental initiatives and benefit from established experience, mechanisms and protocols. It would draw on strategic partnerships with renowned wildlife conservation institutions in the region and elsewhere. It would develop an active *knowledge dissemination program* that may include: (i) publication of research and pilot project results; (ii) sponsorship of workshops, lectures and seminars; (iii) special seminars aimed at decision makers in the participating governments (legislators, administrators and policy makers); (iv) training modules and teaching materials for wildlife managers; and (v) development of protocols for informing policy and wildlife managers in the field.

34. *Sub-component 2.2: PA and GRF management with regional conservation benefits*<sup>27</sup> (US\$2.003 million). Bhutan – like Bangladesh and Nepal that are participating in the regional project’s first phase – recognizes that conservation of wildlife resources, in general, and of charismatic flagship species, in particular, would not succeed without prudent investments in PAs and GRFs aimed at ensuring a haven for wildlife. Hence, this sub-component would support the establishment and operation of two competitive funding windows for: (i) conservation, protection and management of PAs and GRFs with regional conservation benefits; and (ii) innovative pilot projects in wildlife conservation with regional dimensions. Activities supported under the funding windows will complement other conservation efforts supported by development partners, international conservation NGOs and the Royal Government of Bhutan (RGOB).

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establishment and maintenance of systems and mechanisms to address the threats to wildlife due to poaching and illegal trade.

<sup>25</sup> Laos and Vietnam may join the VRCE at a later stage. Connection to other knowledge hubs and centers of excellence in Southeast Asia and Africa may be established through the relevant partnership mechanisms under the Global Tiger Recovery Program and the South-South Experience Exchange Program, respectively.

<sup>26</sup> VRCE would be managed by a director and this position is envisaged to rotate among the participating countries to assure appropriate ownership and representation.

<sup>27</sup> The use of the term “protected areas” will be deemed to include PAs and GRFs when used in this document.

35. RGOB adheres to a policy of utilizing only grant funds for pure conservation investments in habitat management, species monitoring and endangered species recovery plans, etc. Such activities will be supported by grant funds outside the framework of this project. This sub-component would support investments that lead to improvements in wildlife protection and management of PAs and GRFs. Priority under Window 1 will be given to activities such as the development of PA management offices, wildlife rescue centers and information/visitor centers. The activities supported by other donors and those financed under the project would complement each other and together would enhance the ability of WCD to more effectively engage in conservation, protection and management of Bhutan's PA network.

36. Window 2 would support innovative pilot projects that would contribute towards more effective conservation at the national and regional levels. Activities supported under this window include: (i) pilot programs in human wildlife conflict management models with financial and other incentives to encourage human wildlife coexistence; (ii) identification and development of ecotourism opportunities, camping sites, nature trails, canopy walks, etc.; (iii) pilot programs in greening infrastructure in and around PAs and GRFs in order to enhance the conservation status of sensitive ecosystems; and (iv) pilot programs in the conservation of endangered flagship species.

37. A competitive, demand-driven approach to reward innovation and efficiency of the managers of the PAs and GRFs would be applied in selecting the activities that would receive support under Windows 1 and 2. A transparent review and approval process for both windows will be developed and implemented. The eligibility criteria (including a negative list of activities) will be specified in the operational manuals to be finalized prior to disbursement.

38. Since the precise PAs and GRFs would be identified only during the preparation of the funding proposals, more focused consultations with those Bhutanese communities that may be affected by the proposed investments as well as site-specific environmental and social assessments would be undertaken when Component 2.2 is underway. However, WCD has prepared an environmental and social management framework (see Section VI.E).

### **Component 3: Project coordination and communication (US\$0.04 million)**

39. Component 3 would focus on project coordination and communications. Since project coordination and implementation will be carried out by WCD's regular staff, with support from DOFPS and the Ministry of Agriculture and Forests (MOAF), funding of project coordination and operating costs will be RGOB's contribution to the project. No project funds will be used for this purpose. However, financial support to Bhutan for regional coordination is required due to the need to closely coordinate regional activities among participating countries.

40. The project will adopt a multi-pronged approach to communications in order to meet regional and local challenges. It will rely on the regular communications mechanism within WCD and DOFPS to meet the project's communication needs. A wide range of consultations with various stakeholder groups will be conducted at the national and local levels. It is expected that rolling consultations will continue throughout the project cycle. The communications sub-component – that is being developed and implemented in collaboration with the World Bank's

external relations specialists – will harmonize with GTI in view of the latter’s broader geographic mandate to engage in demand side management.

## **B. Project Financing**

### **1. Lending Instrument**

41. The proposed second phase would be supported within the regional horizontal adaptable program loan (APL).

- A horizontal APL structure permits countries to join on a commitment and/or readiness basis. This APL is envisaged as a four-phased operation. Bangladesh and Nepal are participating in the first phase (supported by IDA credit and grant of US\$39 million) while Bhutan joins in the second phase. India, Sri Lanka, Laos and Vietnam may participate with all phases expected to total US\$130 million.<sup>28</sup> Bhutan’s implementation of the second phase is planned for November 2011 – February 2016.<sup>29</sup>
- The core issue relates to the mitigation of illegal wildlife trade across borders. The supply of wildlife is based throughout South and South East Asia (Bangladesh, Bhutan, India, and Nepal as well as Laos and Vietnam) and located physically in border straddling areas. The regional approach will help build synergies, provide tools for more effective enforcement, support agencies in each country to address wildlife trafficking, build closer collaboration with existing global organizations and enhance wildlife conservation through a landscape approach. As a regional operation, the participating countries would have *access to regional IDA* funds.
- Bhutan’s readiness to participate in the regional APL is manifested by: (i) its formal letter to IDA expressing its intent to tap resources for the project through designating US\$0.75 million for the project under Bhutan’s national IDA; (ii) a program of activities designed to meet the PDO; and (iii) IDA’s appraisal of the program for Bhutan.

### **2. Project Financing Table (See Table 1 below.)**

## **C. Lessons Learned and Reflected in the Project Design**

42. Tackling the illegal wildlife trade remains a formidable challenge and the project recognizes that interventions will need to be sustained and multi-pronged. It would require addressing the many links along the “supply” chain, with a focus on the vulnerabilities, as well as the demand side which is a long-run issue, with consumption occurring outside the South Asia region. There are lessons to be learned from the accumulated evidence of enforcement agencies in this and other related sectors. At the outset, it was evident that a “do-nothing” alternative

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<sup>28</sup> To date, the notional IDA financing amounts for future APL phases include US\$36 million for India and US\$30 million for Laos and Vietnam.

<sup>29</sup> Implementation of the first phase is planned for July 2011 – June 2016 while the third and fourth phases would be in January 2012 – June 2018.

could not be considered. Countries acting unilaterally are spending increasingly large sums to protect endangered species and eroding habitats but with limited impact.

**Table 1. Project Costs by Component for the Second Phase of the APL**

<b>Project Cost by Component</b>	<b>Project cost (US\$ million)</b>	<b>IDA Financing (US\$ million)</b>	<b>% Financing</b>
Component 1: Capacity building and cooperation for addressing the illegal trans-boundary wildlife trade	0.08	0.08	100
Component 2: Promoting wildlife conservation in South Asia	2.01	2.01	100
Component 3: Project coordination and communication	0.04	0.04	
Total Baseline Costs	2.13	2.13	
Price Contingencies	0.12	0.12	
Total Project Costs	<b>2.25</b>	<b>2.25</b>	
Total Financing Required	<b>2.25</b>	<b>2.25</b>	<b>100</b>

43. To date, Bhutan and the other countries are tackling the illegal trade unilaterally, with uncoordinated investments in enforcement, while the problem is regional in nature. The trade is practiced by moving to the most porous locations with the least level of enforcement. Coordination and unity of enforcement efforts would increase the costs and retard the volume of the illegal trade. The regional approach is necessary to assure more effective investments in tackling the illegal trade. Drawing upon the foundation of the ASEAN–WEN, this project will seek to promote synergies and harmonize enforcement efforts. However, there are very few best practices and lessons that are available in this context. Recognizing the complexities involved, an important aspect of this project is to create the synergies and structures that are needed to promote learning, and adaptive management approaches that lend themselves to improvements.

44. The project design has benefited from the growing body of empirical evidence on the medium-term performance of Integrated Conservation and Development Projects (ICDPs). ICDPs reached a high point in the 1980s and 1990s. They offered attractive prospects for promoting conservation and rural development simultaneously but often without any need for explicit investments in habitat or wildlife protection. Typically, ICDPs have provided alternative rural livelihoods in an attempt to draw labor away from more destructive forms of economic enterprise (e.g. fuel wood collection or poaching) towards sustainable modes of employment. As many ICDPs have reached maturity, objective and retrospective quantitative evaluations have become possible where adequate baseline data were collected. The empirical evidence suggests that success in achieving the dual goals of development and sustainability often has been elusive. ICDPs have been more successful in providing rural employment than in producing any discernable conservation benefits. Success is especially challenging in economies with dense populations because project coverage is seldom broad enough to cover the relevant population. Even with comprehensive coverage, perverse and counter-productive consequences have been

observed because ICDPs act as magnets, attracting more people and resulting in greater exploitation of the resource base. Indeed, ICDPs tended to add new income-generating activities rather than eliminate or substitute activities not conducive to conservation.

45. In recognition of the limitations, Sub-component 2.2 of the project looks to alternative research on approaches that blend regulations with direct incentives for conservation. This is consistent with the most recent empirical and experimental economics literature on incentives and performance (conducted outside of South Asia).<sup>30</sup> The literature suggests that direct and narrowly targeted incentive schemes that are based on rewards for conservation outcomes (e.g. competitive funding, targeted payments for environmental services programs) are likely to be more effective than indirect and broadly targeted schemes, such as ICDPs. Sub-component 2.2 would promote innovation in regional conservation approaches through competitive, demand-driven funding with a transparent process for the submission, review and approval of proposals.

## IV. Implementation

### A. Institutional and Implementation Arrangements

46. **Regional.** The participating countries have agreed that a strong regional coordination mechanism would need to be in place to ensure the achievement of the PDO. Regional coordination would be exercised at two levels: (i) the policy level; and (ii) the operational level. At the policy level, a Regional Policy Steering Committee (RPSC) would be established. The RPSC would comprise the Secretaries of the Ministries responsible for wildlife and forestry in the participating countries and the heads of the project implementing agencies. The RPSC's main responsibility is to ensure collaboration and coordination in regional wildlife conservation and wildlife protection policies. It would be the forum for resolving operational issues with regional implications that arise during implementation. Its chairmanship would be assigned to the ministerial Secretary of a participating country for one year and would be rotated among the participating countries. IDA may be invited to participate in the RPSC meetings as an observer. The RPSC would meet once a year in the country chairing the committee.

47. At the operational level, an Operational Steering Committee for Regional Coordination (OSCRC) of the project would be established. Membership in the OSCRC would include the heads of the agencies responsible for wildlife and forestry (i.e., the project implementing agencies) of the participating countries, project managers from each country and one non-government technical expert in the field of wildlife conservation nominated by each participating country. The OSCRC's main responsibilities are to ensure effective coordination of project activities that have regional implications and to foster dialogue on wildlife conservation issues among the participating countries. Any contentious issue that cannot be resolved by the OSCRC may be elevated to the RPSC for recourse. The OSCRC would be chaired by the head of the

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<sup>30</sup> Incentive-based approaches to conservation are being more widely used across the world (see, e.g., A. Arendodo "Green Auctions", *Ecological Economics* (forthcoming); E Bulte and R Damania "Modeling the Economics of Interdependent Species", *Natural Resource Modeling*, 2002, 16: 21-33; T. Cason and R Gangadharan, "A Laboratory Based Test of Conservation Auctions" *Journal of Environmental Economics and Management*, 2004, 46: 446-57

agency responsible for wildlife conservation and management in each participating country for one year and chairmanship would be rotated among the countries.<sup>31</sup> IDA may be invited to participate in the OSCRC meetings as an observer. The OSCRC would meet [at least once a year](#) in the country chairing the committee. The project implementing structures in the participating countries chairing the RPSC and the OSCRC will serve as the secretariats to both committees.<sup>32</sup>

48. **Bhutan.** The main counterpart for the project would be MOAF. The project would be implemented by the regular staff of WCD in DOFPS which is part of MOAF. A designated project management unit will not be established. Project implementation responsibility will rest with WCD's Chief Forest Officer and project work will be undertaken by WCD staff as a part of their routine duties. WCD has experience in managing projects financed by development partners such as UNDP, Government of the Netherlands, WWF, DANIDA and Bhutan Trust Fund for Environmental Conservation. The fiduciary arrangements for the proposed project will be the same as those of other externally funded projects implemented by WCD.

49. A project implementation steering committee (PISC) chaired by the Secretary of MOAF will be established by July 31, 2011 and will be responsible for: (i) reviewing the quarterly and annual progress of the project based on reports prepared by WCD (see below); (ii) guiding WCD on project implementation; (iii) reviewing and approving updated procurement plans; and (iv) conducting independent field visits to the project areas to assess field implementation. Details of the implementation arrangements can be found in the Operational Manual (OM). A draft OM acceptable to IDA has been developed. Adoption of the final OM will be a condition of disbursement.

## **B. Results Monitoring and Evaluation**

50. Monitoring and evaluation (M&E) will be embedded in the various components of the project and technical assistance (TA) provided through the project will include support for M&E. M&E capacity within Bhutan's WCD is weak. Since this APL is South Asia's first regional operation, the project poses unique challenges in implementation and, in particular, M&E. Hence, strong technical support for M&E will be provided to WCD (as well as at the regional level). WCD will work closely with the M&E units within MOAF.

51. WCD, along with the project implementing/coordination units (PIU/PCUs) in the other countries, would recruit an independent firm to carry out baseline surveys, especially of the biodiversity status, populations and habitats of flagship species, to establish baselines, where applicable, by the end of year one of implementation. Participation of WCD and the PA staff in the baseline surveys would be encouraged in order to build local capacity for monitoring. WCD and the PIU/PCUs of the other participating countries will hire independent consultants to undertake mid-term and end-of-project evaluations as well as technical, environmental and social audits during project implementation. WCD will ensure that the following cross-cutting issues are embedded in the project activities and are regularly monitored and reported: (i) women's participation and gender equity; (ii) compliance with the environmental and social safeguards;

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<sup>31</sup> In the case of Nepal, the OSCRC will be co-chaired by the heads of the Department of National Parks and Wildlife Conservation and of the Department of Forests.

<sup>32</sup> Coordination among the policy and operational regional committees, the PMUs and GTI will be encouraged.

and (iii) good governance.

52. WCD will report on the results of the M&E activities in its quarterly progress reports to the national and regional steering committees and MOAF as well as to IDA. VRCE will also prepare quarterly progress reports. (Annex 1 has details on results framework and monitoring.)

### **C. Sustainability**

53. Project sustainability will depend ultimately on the commitment and ownership of the participating countries to continue to tackle illegal wildlife trade through collaboration and regional harmonization, adopt landscape based conservation and adequately fund the project activities. At the project level, sustainability will depend on the technical and institutional capacity to maintain the initiatives after project completion. It is important to recognize that sustainability of the project's efforts, particularly for enhanced regional collaboration, cannot be achieved through a single operation (including this APL). It is likely to be a long-term process requiring continued engagement by conservation and development partners, including IDA.

54. Bhutan is committed to protecting endangered wildlife species and their habitats as evidenced by the legislation it has adopted and the resources it has allocated to wildlife protection, agreements signed with CITES and the number of regional partnerships – including the newly launched SAWEN – the country has joined. IDA will maintain continuous dialogue on wildlife conservation with Bhutan and regular consultations with NGOs to help sustain the commitment. To address the funding risks after project completion, the project will pursue the following: (i) maintaining the dialogue with Bhutan on future budget allocations to WCD; (ii) enabling future partnerships with international NGOs and global initiatives by ensuring that they are part of WCD's mandate; and (iii) exploring the possible use of ecotourism revenues to finance a portion of the conservation and enforcement costs.

55. To sustain the enhanced integrity mechanisms and regional harmonization, the project incorporates actions to mobilize internal and external integrity mechanisms (e.g., internal control mechanisms, citizens' oversight, and third party monitoring), and will monitor participating countries' adherence to their commitments under the relevant international treaties. The proposed second phase entails extensive TA to WCD on project implementation and M&E. The project would support activities for strengthened governance within MOAF and within SAWEN (when the body becomes operational). With WCD embedded in Bhutan's public administration, the project's practices and standards would be mainstreamed during implementation.

## **V. Key Risks and Mitigation Measures**

56. The regional project faces high risks during preparation and implementation. Potential risks are summarized in the Operational Risk Assessment Framework (Annex 4). The main risks are associated with the number of implementing agencies with weak capacity and the multiplicity of countries with historically low levels of collaboration, the need to mobilize strong integrity mechanisms – at the national and regional levels – to tackle illegal wildlife trade, and the risk of systemic corruption (i.e., bribery) in targeting the illicit trade. The potential impact



and likelihood of the key risks to achieving results and mitigation measures are described below.

57. *Stakeholder risks.* At the regional level, opposition by key conservationist NGOs to IDA's involvement in wildlife conservation could lead to the withdrawal of support or commitment by any of the participating governments. However, Bhutan's strong stance vis-à-vis environmental stewardship and TRAFFIC's collaboration in the project would help mitigate such regional risk. Regular consultations with environmental NGOs and affected communities in Bhutan will be pursued throughout the life of the project. A proactive communications plan will be adjusted regularly to respond to the context in real time.

58. *Implementing agency risks.* WCD lacks adequate project management capacity and this could result in slow implementation. The number of implementing agencies in the participating countries could complicate effective coordination of the project activities, including efficient fund flows. Almost non-existent joint decision-making and collaboration across Bhutan's borders could slow down project progress. There is also a risk that the Regional Proposal Review Committee (that will be created to review innovative pilot projects for financing under Sub-component 2.2) and the regional governance structure may face coordination problems. Key mitigation measures include, among others: (i) creation of regional coordination structures at the policy and operational levels (see Section IV.A); (ii) WCD to receive significant TA, training and separate budgets for project implementation from other sources; (iii) WCD, MOAF and Bhutan's project implementation steering committee to support and monitor overall coordination of project implementation; (iv) activities to facilitate creation of regional protocols and enforcement standards, development of best practice applications and sharing successful field schemes and knowledge/research across the region; (v) monitoring of Bhutan's adherence to its commitments under the relevant international treaties (e.g., CITES and customs integrity initiatives); and (vi) arrangements for continuous dialogue with WCD and MOAF.

59. The risk of systemic corruption (i.e. bribery) in addressing illicit trade in Bhutan is relatively low. If the risk were to materialize, it can be mitigated through: (i) knowledge sharing and adoption of standards and best practices; (ii) actions to mobilize internal and external integrity mechanisms (e.g., internal controls, citizens' oversight, and third party monitoring); (iii) proactive disclosure of important information on project activities and agency performance; and (iv) adoption of a communications strategy for transparency and demand for good governance.<sup>33</sup>

60. *Project design risks.* The project's success depends on coherence and coordination regarding policies and project activities between WCD and the PIU/PCUs in Bangladesh and Nepal and in other participating countries. Currently, the requisite coordination is weak although a strong commitment among the implementing agencies and relevant institutions to collaborate was forged as officials from Bangladesh, Bhutan, India and Nepal met during the preparatory phase to focus and build synergy on the project's regional issues and to agree on mechanisms for collaboration. Bhutan also endorsed the St. Petersburg Declaration on Tiger Conservation.<sup>34</sup> The mitigation measures include: (i) implementation of the project activities with regional scope

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<sup>33</sup> The APL would provide support to the monitoring and implementation of a Governance Accountability and Action Plan (GAAP) in some participating countries.

<sup>34</sup> The countries pledged their commitment to "strengthening regional law enforcement through bilateral and multilateral arrangements and strengthened international cooperation, coordination, and collaboration."

and impact; (ii) flexible adaptation of the project design based on Bhutan's implementation experience; and (iii) coherence and coordination of the policies and project activities by Bhutan's project implementation steering committee and the regional steering committees.

61. *Project delivery quality.* WCD and the other PIU/PCUs may not have the commitment to sustain SAWEN after project completion and they may not maintain the M&E capacity built during implementation. Future funding to sustain the program and sustainability of enhanced integrity mechanisms and regional harmonization are not assured. The mitigation measures to address future funding have been described in Section IV.C above.

## **VI. Appraisal Summary**

### **A. Economic Analysis**

62. Illegal wildlife trade has led to the massive destruction of habitats and species, threatening irrevocable damage to ecosystems. Wildlife traffickers operate within and between countries through well-organized, cross-border networks. Unfortunately, data on illegal trade are sparse and anecdotal due to the clandestine nature of the industry. Hence, conducting a conventional cost-benefit analysis of the project payoffs is not possible.

63. Instead, the economic analysis draws on the literature regarding the economics of combating global crime and, in particular terrorism, through cooperative actions. In a seminal 2009 paper, Sandler et al argue that joint and cooperative actions are a public good, comparing the decision-making by countries to that of a "prisoner's dilemma". Annex 9 presents a comprehensive review of the economic aspects of cooperation in developing and implementing transnational policies for international rivers, forests and habitat management.

64. The prisoner's dilemma demonstrates that cooperative and offensive measures to weaken a transnational terrorist group would generate positive externalities to all countries at risk. However, the decision by any given country on how much to invest in anti-terrorist measures is based quite often solely on the benefits that accrue to that country. Such decision-making can lead to under-investment in cooperative measures. However, the under-investment can be corrected through organizations like INTERPOL that facilitate cooperation among countries. Sandler estimated that a dollar spent on INTERPOL counterterrorism generates a payback of US\$40-200. High benefit-cost ratios of INTERPOL operations reflect the benefits to all of INTERPOL members at risk to terrorism because INTERPOL makes it possible for its members to cooperate in carrying out proactive counterterrorism measures in a cost-effective manner.

65. Sandler's analysis on defensive and pro-active cooperative measures is relevant to the proposed project's goal of combating illegal wildlife trade.<sup>35</sup> When one country succeeds in arresting poachers or eradicating illicit trade networks, it is likely that illegal acts are transferred to other countries with relatively weaker enforcement. Similarly, because of the externalities that arise from combating illegal trade, countries have an incentive to free-ride on the activities

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<sup>35</sup> T. Sandler, D. Arce, W. Enders, 2009, "An Evaluation of INTERPOL's Cooperative-based Counterterrorism Linkages", <http://peio.vweb10-test.gwdg.de/papers2010/Sandler,%20Arce,%20Enders%2027.12.09.pdf>

of its neighboring countries.

66. Unlike terrorism, successful enforcement that leads to the decline in the supply of illegal wildlife commodities raises the prices of such products and, in turn, increases the incentive to engage in illegal activities. Measures to tackle the demand for wildlife commodities – the root cause of the problem – are also imperative.

67. The quantitative analysis builds on Sandler’s methodology of cooperative actions against a “public bad”. National data of poaching and illegal wildlife trade are not available and estimates of the incidence of these crimes are elusive. The project’s regional approach entails the use of available estimates for South Asia’s share of the world’s biodiversity (i.e., 13 to 15%) and for the global value of illegal wildlife trade (i.e., US\$20 billion) as the starting point of the analysis. Thus, the value of the illegal wildlife trade in the region is assumed to range from US\$2.6 to US\$3 billion. These figures represent quite conservative estimates because South Asia is disproportionately affected by illegal wildlife trade due to the high demand for species like wild tigers and rhinos.

68. The economic analysis entailed two sets (each with over 100 simulations) under varying assumptions. See Annex 9 for details. Most of the simulations resulted in benefit-cost ratios of above 1, demonstrating that the benefits of the proposed project exceed the costs. Indeed, many of the benefit-cost results are 2 and higher, reaching values of above 40 in some cases. Still, the simulation results provide conservative, lower-bound estimates of the economic benefits of the project. If the analysis had included other benefits (such as those arising from nature-based tourism), the break-even point for the project would be reached much earlier and the benefit-cost ratios would be even higher. The analysis concludes that the benefits from addressing illegal wildlife trade under the project would far outweigh the investment costs.

## **B. Technical**

69. The project would allow DOFPS to help mitigate the burgeoning threat to Bhutan’s and the region’s biodiversity from poaching and illegal wildlife trade. The design of the project objective, components and activities benefited from the contributions by Bhutan’s WCD, the implementing structures of the other participating countries, a cross-sectoral IDA team and TRAFFIC as well as the experiences of GTI in its discussions with the TRCs and conservation NGOs. From a strategic standpoint, structuring the project around the themes of capacity building, promotion of regional wildlife conservation and project coordination and communications is congruent with the approach of a horizontal APL based on country readiness to participate. Flexibility is an important feature of the APL as Bhutan could develop practical approaches to wildlife protection that are appropriate to its local conditions and needs and that would also lead to a significant regional impact. Flexibility is inherent as WCD would create or enhance knowledge tools and innovative methods (e.g., forensic laboratories and analysis) to inform Bhutan’s policymakers, pilot global best practices, or develop harmonized and internationally tested protocols on a demand-driven basis.

70. The main challenges would be the inadequacy of coordination mechanisms across Bhutan’s borders, DOFPS’s communication infrastructure as well as its administrative and

technical capacity to interact with the other implementing agencies of countries participating in the APL. While these challenges are significant, awaiting a solution prior to launch of the second phase would result in a protracted vacuum in combating illegal wildlife trade and mitigating biodiversity loss. DOFPS will be able to build and strengthen its financial, administrative and technical functions, upgrade infrastructure and equipment, enhance enforcement and regulatory framework, and also promote collaboration with civil society and communities, especially those living within and along the habitats and frontiers. With emphasis on building skills and training in areas for which market demand exists, the project could help Bhutan's poor communities fulfill their aspirations for improved economic opportunities. All in all, the culture of conservancy would be strengthened within Bhutan's local communities and, with collaboration across borders, would lead to lasting benefits of sustainable enforcement, diminished vulnerability to criminal activities, resilient wildlife and healthy ecosystems for Bhutan and for Asia.

### **C. Financial Management**

71. Based on the detailed Financial Management Assessment carried out for the project the financial management (FM) risk for the project is assessed as "Substantial", but is expected to be "Moderate" after implementation of the mitigation measures described in Annex 3.

72. The budget for all project expenditures will be included in the overall budget of WCD as the project implementing agency. All eligible project expenditures, including those incurred by other spending units, such as the PAs and GFRs, will be accounted for and processed for payment through WCD. No direct flows of project funds to the other project stakeholders will take place.<sup>36</sup> The accounting and financial reporting functions at WCD will be managed by the existing accounting staff. A FM specialist (FMS) among WCD's accounting staff, acceptable to IDA, will be appointed by WCD prior to negotiations. Training in Bank FM procedures will be provided by IDA staff to the FMS by September 30, 2011. WCD will have the primary responsibility of: (a) routing all fund requests to the Department of Public Accounts (DPA) and tracking the fund releases; (b) reconciliation of the Designated Account; and (c) preparing and submitting the quarterly consolidated interim financial reports to IDA. Project disbursement will be made on the basis of quarterly IUFs. As mentioned above, WCD has experience in managing externally financed projects with development partners. The fiduciary arrangements for the project will be the same as those for other IDA-funded projects implemented by RGOB's ministries.

73. Consolidated annual project financial statements will be audited each year by the Royal Audit Authority (RAA), Bhutan's supreme audit institution, which is acceptable to IDA. The format will include the consolidated financial statements for the project along with a statement reconciling credit disbursements against claims submitted to IDA and balances available in the Designated Account, as reported in the interim unaudited financial reports (IUFs).

### **D. Procurement**

74. IDA's Procurement Specialist (PS) carried out an assessment of MOAF's capacity to

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<sup>36</sup> These include development partners, international NGOs and local communities.

carry out procurement actions for the project. The assessment reviewed the organizational structure for project implementation and the interaction between the project staff responsible for procurement and MOAF's relevant central unit for administration and finance. Given the experience of MOAF's procurement unit with other externally financed projects, it will carry out the project's procurement activities. The overall project risk for procurement is "High" and it is expected to be rated "Substantial" with the agreed mitigation measures. The key issues and risks concerning procurement during implementation have been identified, which include the need for training MOAF staff. Procurement training is expected to be provided by IDA's PS. Procurement procedures to be established for the project have been documented in the draft OM and they will be carried out in accordance with the IDA Procurement Guidelines and Consultant Guidelines dated January 2011 as well as the provisions in the Financing Agreement (FA).

## **E. Social**

75. RGOB prepared a country-specific Environmental and Social Management Framework (ESMF) in lieu of a project-specific social impact assessment (SIA) since details of specific sub-project activities and interventions that may have social impacts are not yet available. The ESMF includes an assessment of generic issues that may arise during implementation, including measures for social risk mitigation and institutional arrangements for conducting SIAs, implementation and monitoring. All activities financed under the project in general, and the pilot projects in Sub-component 2.2 in particular, will require specific SIAs and social mitigation measures. The project will not fund any activity without a completed SIA. The ESMF will serve as guidance on the level of social analysis and mitigation required for all interventions that may trigger negative social impacts.

76. While no land acquisition or resettlement in Bhutan would be carried out under the project, communities that traditionally rely on the PAs for their livelihoods may be affected. Therefore, community consultations are an integral part of the preparation and implementation of proposals under Sub-component 2.2 and will be an ongoing feature in the project. Since livelihoods may be affected, OP/BP 4.12: Involuntary Resettlement will be triggered. In Bhutan, the use of indigenous peoples (IP) is ambiguous. People in every valley/region may be classified as IP since almost every valley/region has its own dialect. Also, those minor ethnic groups usually form the dominant members of the local community. Therefore, there are no groups which can be said to be vulnerable or disadvantaged because of ethnicity. Hence, the IP policy will not be triggered. The vulnerable and disadvantaged groups will be dealt through OP 4.12 Involuntary Resettlement.

## **F. Environment**

77. With support for the conservation and management of critical terrestrial, marine and wetland ecosystems and the protection of their wildlife and habitats as its centerpiece, the second phase of the APL is expected to produce positive environmental impacts in the long term. For safeguard purposes, it has been classified as "Category B" since it is anticipated that some activities would involve minor civil works in areas of high ecological sensitivity and vulnerability; hence, certain short term negative environmental impacts may occur during the implementation phase. These negative impacts are expected to be largely on-site and easily

mitigated with proper planning and sound environmental practices. The project will not support the construction of any major new infrastructure within the PA network. Considering the sensitive nature of PAs, the following environmental safeguard polices are triggered: OP/BP 4.01 Environmental Assessment; OP/BP 4.04 Natural Habitats; and OP/BP 4.36 on Forests.

78. As details of specific sub-project activities and interventions that may have environmental and impacts are not yet available, RGOB undertook the preparation of an Environmental and Social Management Frameworks (ESMF) in lieu of a project-specific Environmental Assessment (EA). The ESMF primarily includes: (i) an assessment of generic issues typically associated with the proposed interventions; (ii) measures for environmental risk mitigation; and (iii) institutional arrangements for conducting EAs as well as Environmental Management Plan (EMP) preparation, implementation and monitoring. The ESMF will serve as a template to guide the environmental analysis required for all interventions that could trigger negative environmental impacts. The ESMF will ensure the project's compliance with the relevant national laws of Bhutan and IDA's safeguard policies. The ESMF is available in the project files and was disclosed publicly on May 19, 2011.

79. The FA would include the following specific provisions: (i) IDA financing of the project – and specifically, the pilot projects under Sub-component 2.2 – may not and will not involve any involuntary resettlement or land acquisition; (ii) only works with no irreversible safeguard implications will be carried out; and (iii) weapons or training of law enforcement personnel may not be procured under the project. The project will *not* support the construction of *new major* infrastructure in the PA networks. A screening mechanism and a negative list of investments are being considered or developed.

## Annex 1: Results Framework and Monitoring

### BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia

<b>Project Development Objective (PDO): To assist the participating governments of Bhutan and others to build or enhance shared capacity, institutions, knowledge and incentives to collaborate in tackling illegal wildlife trade and other selected regional conservation threats to habitats in border areas</b>												
PDO Level Results Indicators*	Core	Unit of Measure	Baseline	Cumulative Target Values**					Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5				
<b>Indicator One:</b> Progress towards the development of sustainable regional mechanisms for addressing illegal wildlife trade and other conservation threats.	<input type="checkbox"/>	Regional coordination forum	No regional mechanism is in place for addressing illegal wildlife trade and other conservation threats at present, but there is agreement among regional countries to establish the South Asia Wildlife Enforcement Network (SAWEN) with similar objectives.	Establishment of a regional project coordination mechanism between Tiger Range Countries (TRCs) as an interim measure, while monitoring the progress of the establishment of SAWEN.	At least two regional coordination meetings among the TRCs held.	If SAWEN is operational, a plan developed to integrate the regional coordination undertaken through the project into the broader SAWEN mandate.	If SAWEN is not operational, a regional coordination forum agreeable to the TRCs is developed.	Establishment of the regional coordination forum agreed to in Year 4 by the TRCs.	Annually	M&E Report	Implementing agencies of participating countries and regional coordination committee	Demonstrate value of a coordinated approach to addressing illegal wildlife trade and other conservation threats
<b>Indicator Two:</b> Development of at least one protocol each on a common research agenda, knowledge	<input type="checkbox"/>	Number (no.) of protocols	No protocols in the areas identified at present.	Agreement in principle between participating countries that at least one protocol is	Protocol on knowledge sharing developed.	Protocol on a common research agenda developed.	Protocol on collaboration and division of labor developed.	At least one protocol implemented.	Annually	M&E Report	Implementing agencies of participating countries and regional coordination committee	Demonstrate regional cooperation in research, knowledge sharing and collaboration

sharing, collaboration and division of labor.				needed on: (i) a common research agenda; (ii) knowledge sharing; and (iii) collaboration and division of labor.								
<b>Indicator Three:</b> Agreement among the enforcement agencies on at least two regional protocols, including approaches and solutions.	<input type="checkbox"/>	No. of protocols	No regional protocols in place at present.	Dialogue among regional enforcement agencies on the need for regional protocols commenced.	Agreement reached on at least two regional protocols and approaches and solutions finalized for implementation of protocols with enforcement agencies of regional countries.	Formal agreement reached between countries to implement the regional protocols developed.	At least one protocol implemented.	Implementation effectiveness of regional protocols reviewed and revisions made as necessary.	Annually	M&E Report	Implementing agencies of the participating countries.	Assess the effectiveness of regional protocols.
<b>Indicator Four:</b> Implementation of at least three regional pilots or initiatives in wildlife enforcement and conservation	<input type="checkbox"/>	No. of pilot projects or initiatives	No such regional pilots or initiatives in place.	Consultations on and planning of pilot projects and initiatives undertaken.	Suitable sites, design of pilot projects and/or initiatives selected.	Implementation of at least one pilot program or initiative is underway.	Implementation of balance pilots and initiatives is underway.	Progress of regional pilots and initiatives reviewed.	Annually	M&E Report	Collaborated efforts among implementing agencies	Assess the effectiveness of coordinated approaches to regional enforcement and conservation .
<b>INTERMEDIATE RESULTS</b>												
<b>Regional</b>												
<b>Intermediate Result:</b>												
<i>Intermediate Result Indicator One:</i> Development of a common	<input type="checkbox"/>	Outputs	Common research and conservation program is absent.	National consultations to identify common research and	Regional consultations to agree on common research and	10% of the research program is implemented.	20% of the research program is implemented.	30% of the research program is implemented.	Annually	M&E Report	Implementing agencies of the participating countries	Build synergy between research institutions



conservation research program for regional wildlife management with particular emphasis on tiger conservation				conservation needs undertaken.	conservation needs and finalizing of program undertaken.							and conservation groups to provide scientific basis for conservation and management of wildlife
<i>Intermediate Result Indicator Two:</i> Set up a knowledge sharing mechanism among participating countries	<input type="checkbox"/>	Outputs	Regional knowledge sharing mechanism is absent.	Regional consultations to agree on developing a knowledge sharing mechanism undertaken.	Knowledge sharing mechanism developed.	Implementation of the knowledge sharing mechanism.	-	-	Annually	M&E Report	Implementing agencies of the participating countries	Build synergies among research institutions and conservation groups to share knowledge useful for wildlife protection
<b>Bhutan</b>												
<b>Intermediate Result (Component One):</b> Capacity built for wildlife conservation and cooperation for addressing the trans-boundary illegal wildlife trade in Bhutan												
<i>Intermediate Result Indicator One:</i> Strengthened enforcement and effective control of illegal wildlife trade	<input type="checkbox"/>	Outputs	WCD does not have a formalized information/intelligence network to support enforcement and control of illegal wildlife trade at present.	Development of a detailed plan for formal creation of information/intelligence network.	Identification of data needs and establishment of data collection system.	Collection of data or information.	Operationalization of the information/intelligence network and data use toward improved enforcement and control of illegal wildlife trade.	Institutionalization of the information intelligence network as part of WCD's law enforcement system.	Annually	M&E Report	DOFPS	Evaluation of the effectiveness of the information/intelligence network in improving enforcement and control of illegal wildlife trade
<i>Intermediate Result indicator Two:</i> Improved feedback or record of WCD's	<input type="checkbox"/>	Outputs	Inadequate capacity to respond to wildlife crimes and trans-	Development of training programs for field staff.	30% of training programs completed.	Balance training programs completed and trans-boundary	Ttrans-boundary coordination mechanisms implemented.	Evaluations of successful (or non-successful) efforts of	Annually	M&E Report	DOFPS	Assess capacity to sustain measures put in place to respond to

trained staff vis-à-vis capacity for enforcement, trans-boundary coordination and responsiveness to wildlife crimes			boundary coordination.			coordination mechanisms implemented.		trans-boundary coordination in improving enforcement and illegal wildlife crime control.				wildlife crimes and effective trans-boundary coordination
<b>Intermediate Result (Component Two):</b> Wildlife conservation in South Asia promoted for improved management of PAs and effective wildlife protection												
<i>Intermediate Result Indicator One:</i> Improved management of PAs through development of better management, infrastructure and trained staff	<input type="checkbox"/>	No. of PAs with demonstrated improvement in presence of trained WCD field staff	Non-existent or inadequate infrastructure facilities for PA management.	Identification of PAs with inadequate or no PA management offices.	Design of “green” PA management offices to be located in non-core conservation areas.	Construction of PA management offices.	Construction of PA management offices.	Deployment of trained field staff in the PA management offices.	Annually	M&E Report	DOFPS	Progress with construction and deployment of trained staff in PAs and assessment of improved management of PAs using Management Effectiveness Tracking Tool (METT)
<i>Intermediate Result Indicator Two:</i> Better care and management of injured and rescued wildlife	<input type="checkbox"/>	Nos. and area	No wildlife rescue centers in place.	Identification of locations for creating wildlife rescue centers.	Designs for the construction of wildlife rescue centers.	Construction of wildlife rescue centers.	Training and deployment of staff at the wildlife rescue centers and development of wildlife rehabilitation programs.	Implementation of wildlife rehabilitation programs at the rescue centers.	Annually	M&E Report	DOFPS	No. of rescued and rehabilitated animals and those released into the wild
<i>Intermediate Result indicator Three:</i>	<input type="checkbox"/>	No. of PA visitors	Some PAs lack visitor or information	Identification of PAs where educational	Construction of visitor centers.	Construction of visitor centers and	Conducting visitor satisfaction	Conducting visitor satisfaction	Annually	M&E Report	DOFPS	% increase in the degree of satisfac-

Improved facilities for wildlife education of visitors to PAs		using PA visitor centers	centers for providing wildlife education.	visitor facilities are to be established and designed to be environmentally friendly.		development of visitor education material.	surveys.	surveys.				tion of visitors to relevant PAs between years 4 and 5 of project implementation
<i>Intermediate Result Indicator Four:</i> Reduction of tiger-human conflict (THC) and human-elephant (HEC) conflict by 50% in pilot sites	<input type="checkbox"/>	Outputs	No models have been tested.	Identification of pilot sites and collection of preliminary data.	Data collection and development of appropriate models for THC and HEC mitigation.	50% of THC and HEC models implemented.	Development of suitable models for replication.	Replication strategy and master plan developed.	Annually	M&E Report	DOFPS	Assess successful models, their replicability; document evidence based on best practices and lessons learned
<i>Intermediate Result Indicator Five:</i> 30% increase in visitor satisfaction due to improved ecotourism	<input type="checkbox"/>	Outputs %	Ecotourism planning is absent.	Identification of potential sites for ecotourism development; development of ecotourism plans and conduct visitor satisfaction surveys for baseline reference	Implementation of ecotourism plans	Undertake visitor satisfaction surveys	Undertake visitor satisfaction surveys	Undertake visitor satisfaction surveys	Annually	M&E Report	DOFPS	30% increase in visitor satisfaction due to improved ecotourism
<i>Intermediate Result Indicator Six:</i> 20% increase in the revenue earning opportunities of PAs and affected communities due to ecotourism.		Outputs %	2010 revenue data and household income	Assessment of households interested in participating in ecotourism;			10% increase in revenue.	20% increase in revenue.				Assess change in revenue data of participating PAs and of household-level incomes of participating communities
<i>Intermediate</i>	<input type="checkbox"/>	Outputs	Greening of	Assessment of	Preparation of	25% of	50% of	75% of	Annually	M&E report	DOFPS	Comparative

<i>Result Indicator Six:</i> Development of smart, green and wildlife friendly infrastructure plans			infrastructure within and adjacent to PAs is absent.	infrastructure and services provided by RGOB to communities within and adjacent to PAs and identification of potential pilot projects for greening infrastructure.	plans for greening infrastructure in the pilot projects.	greening infrastructure pilot projects implemented.	greening infrastructure pilot projects implemented.	greening infrastructure pilot projects implemented.				evaluation of the benefits of greening infrastructure vis-a-vis the typical ones provided by RGOB
<b>Intermediate Result (Component Three):</b> Effective project coordination mechanism in place												
<i>Intermediate Result Indicator One:</i> Establishment of Regional Policy Steering Committee (RPSC) and of Operational Steering Committee for Regional Coordination (OSCRC) and made operational	<input type="checkbox"/>	Outputs	Regional efforts are absent.	Establishment of RPSC.	Fully operational.				Annually	M&E Report	MOAF	Verification of extent of coordination and commitment by stakeholders to contribute towards regional wildlife conservation

## **Annex 2: Detailed Project Description**

### **BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia**

#### **A. Landscape approach for regional cooperation in wildlife conservation and protection**

1. The APL applies a two-pronged approach: (i) capacity building to address the illegal wildlife trade through regional cooperation; and (ii) habitat protection and management to generate regional conservation benefits by ensuring the conservation of endangered and flagship species such as the tiger, snow leopard, rhinoceros, elephant, Himalayan black bear, pigmy hog and red panda in increasingly fragmented habitats and addressing the human-wildlife conflict. The interventions would enhance the capacity of Bhutan's Wildlife Conservation Division (WCD) within the Department of Forests and Park Services (DOFPS) to carry out conservation based on a landscape approach and to address wildlife trafficking. The landscape approach would lead to improved management of the PAs and Government Reserve Forests (GRFs) – that are essential to the long-term conservation of the tiger and other charismatic flagship and endangered species – and would control against the adverse impacts of the illegal trade. Bhutan is a world leader in attempts to use forest corridors to create a durable network of PAs. However, those corridors that came under legal protection 11 years ago are not yet fully as operational conservation corridors. Since flagship species require vast contiguous habitats for effective, long-term conservation, operationalizing these corridors to ensure landscape level connectivity is essential for the survival of flagship species. It is critical that flagship species are managed effectively not only in the designated PAs within Bhutan but also along the corridors to ensure the connectivity of ecosystems across national boundaries. Conservation of Asia's flagship species would lead to improved natural habitats for all species and, ultimately, healthy ecosystems for South and South East Asia.

2. Bhutan has benefited from continued international support for capacity building in wildlife management. DOFPS's capacity improvement has been supported by the Paul Getty Foundation (US\$8 million), MacArthur Foundation (US\$1.5 million), the Bhutan Trust Fund (US\$0.3 million) and DANIDA (US\$0.7 million). Support has included the establishment of a graduate training institute for sustainable natural resources management and biodiversity conservation, upgrading the knowledge and skills of existing staff and increase in trained manpower in natural resources management and research. World Wildlife Fund (WWF) provided some US\$150,000 for tiger monitoring, anti-poaching and trade-related activities, and capacity building in DOFPS. UNDP/GEF has contributed around US\$116,000 for conflict mitigation and anti-poaching activities. Because of the available donor resources, implementation of the project's capacity building and conservation investments would be carried out simultaneously. This arrangement is unlike the first phase of the adaptable program loan (APL) where the components are implemented sequentially (i.e., capacity building followed by investments in conservation).

3. Bhutan is implementing the APL's second phase, with Bangladesh and Nepal participating in the first phase. Laos and Vietnam may join at a subsequent phase. As a regional

leader in conservation, the Government of India's decision to augment resources for PA management and wildlife protection has energized the collaboration among South Asian countries around conservation. India has expressed its intent to participate in the project and, if it does, there would be no investments funded by IDA in the country's PAs and other wildlife habitats. At the November 2010 meeting of conservation officials from Bangladesh, Bhutan, India and Nepal – as the main project stakeholders – the participants discussed the project's regional issues and agreed to adopt specific mechanisms for collaboration in addressing the threats to wildlife and habitats. Together, the participating officials committed to join the Regional Policy Steering Committee (one of the APL's regional governance structures) aimed at ensuring regional coordination as soon as the Committee is established.

## **B. Project components**

4. The IDA-financed program for Bhutan would amount to US\$2.25 million. The project would have three main components and they are described in detail below.

### **Component 1: Capacity building for addressing the illegal trans-boundary wildlife trade (US\$80,500)**

5. DOFPS in the Ministry of Agriculture and Forests (MOAF) was originally established in 1952 as the Department of Forestry to oversee conservation and address the exploitation of the country's significant forest resources. Recognizing the potential value of its forestry resource, Bhutan embarked on efforts to enhance forestry management in the 1970s. Within DOFPS, WCD has direct responsibility for in-situ conservation of biodiversity through the creation or declaration and management of PAs, buffer zones and wildlife corridors. In 1977, WWF began supporting wildlife management with the organization of forest ranger training programs and funding for forest boundary demarcation, building guard posts etc. In 1991, the Royal Government of Bhutan (RGOB) – assisted by UNDP and WWF – established the Trust Fund for Environmental Conservation amounting to US\$20 million. The trust fund aimed to support supplemental training in forestry and ecology, surveying forests, reviewing and implementing management plans for protected areas, and supporting government environmental offices, public awareness programs, and integrated conservation and development programs.

6. The objective of Component 1 is to bring about regional harmonization and collaboration in combating wildlife crime through strengthened legislative and regulatory frameworks, well-equipped specialized agencies and systems, as well as relevant training and awareness programs for staff across the range of agencies that contribute to the enforcement of wildlife laws and regulations. RGOB has a policy stance of relying on grant resources to finance capacity building and minimizing credit or loan finance. Therefore, the project has been designed to build upon complimentary grant funded capacity building activities. The activities supported under the project and by other partners are expected to collectively generate well coordinated frameworks, systems, technology, infrastructure and expertise that would allow Bhutan to reach levels of compatibility with the other participating countries.

7. TRAFFIC International based in Cambridge, United Kingdom and TRAFFIC South Asia contributed substantially to the design of Component 1 of this APL. Established in 1976,

TRAFFIC is a research-driven and action-oriented global network aimed at delivering innovative and practical conservation solutions based on the latest information.<sup>37</sup> Among its many roles, TRAFFIC organizes and assists training and other capacity-building initiatives for officials involved in the regulation of wildlife trade. It provides technical advice and often mediates or facilitates multi-sector and inter-governmental consideration of solutions to trade-related conservation challenges.

### **Sub-component 1.1 Institutional strengthening in wildlife conservation and illegal wildlife trade control (approximately US\$61,500)**

8. Ongoing and proposed capacity building programs supported by other development partners will be complemented by this sub-component through the establishment of an information/intelligence network. Its main objective is to strengthen the information/intelligence network that will contribute towards improved DOFPS's capacity at enforcement and control of illegal wildlife trade. This activity will entail minimal technical assistance.

9. The information/ intelligence network will enable DOFPS to effectively undertake:

- collection and collating of intelligence related to organized wildlife crime activities and dissemination of such information to relevant agencies nationally and regionally to facilitate enforcement and apprehension
- ongoing development of a wildlife crime bank with a database of wildlife crime related information
- coordination of operations of various officers, national agencies and other authorities in enforcing wildlife crime laws within the country or through regional cooperation
- implementation of obligations under various international conventions and protocols related to wildlife crime currently in force
- development of new protocols in areas of interest either nationally or in collaboration with regional wildlife crime control units
- assistance to concerned authorities in regional countries and international organizations to facilitate coordination and collective action in wildlife crime control

### **Sub-component 1.2 Staff capacity building and training toward regional collaboration (US\$19,500)**

10. With the absence of collaborative wildlife conservation and management among the countries in the region, a paradigm shift is needed to encourage regional collaboration. This sub-component would support training and re-orientation of field staff. Interaction with regional agencies responsible for wildlife conservation and control of illegal wildlife trade will be an important aspect of the re-orientation. Knowledge exchange tailored towards regional cooperation in PA management and illegal wildlife trade control would pave the way for cooperation among the countries participating in the project such that their collaboration would be consolidated when SAWEN is formally operational.

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<sup>37</sup> TRAFFIC's mission is to deliver innovative and practical conservation solutions and it develops and organizes training and other capacity-building initiatives for officials involved in the regulation of wildlife trade.

11. Sub-component 1.2 would support: (i) training and workshops for field staff of DOFPS in strengthened enforcement; and (ii) improving trans-boundary coordination. These activities will benefit from TRAFFIC's recommendations on new ways to enhance the ability to combat illegal wildlife trade and strengthen conservation and PA management.<sup>38</sup>

## **Component 2: Promoting wildlife conservation in Asia (US\$2.042 million)**

### ***Sub-component 2.1 Virtual Regional Center of Excellence (VRCE) for wildlife conservation (US\$14,250)***

12. An important objective of this project is to fill crucial knowledge and information gaps in addressing the many regional threats to conservation. With contiguous boundaries and similar habitats, problems are often shared. This component would support the creation of a virtual regional center of excellence (VRCE) for wildlife conservation. VRCE would include a network of scientists and practitioners in wildlife conservation whose mission would be to expand the scope and quality of research in wildlife conservation needed for more effective management of PAs and to develop a common response against illegal wildlife trade in and outside the region as well as to address other regional issues to be agreed by the participating countries. The exclusive focus would be either on promoting a conservation-related regional public good or addressing a regional public bad. Given the existence of national institutions with expertise in this area already, it is critical for VRCE to bring value-added and not duplicate existing efforts.

13. VRCE would provide the first (and only) coordinated response for research and knowledge dissemination on wildlife conservation in South Asia. By playing the role of coordinator and facilitator of knowledge and expertise, VRCE could become a vehicle for promoting dialogue and good practices as well as disseminating knowledge. Because VRCE will be virtual and will not have a central physical facility, it will rely heavily on state-of-the-art ICT to conduct its business and attain its objectives. Specifically, it would combine face-to-face meetings, online presence through a website, social media to reach broad audiences and video-conferencing. VRCE would build on existing regional and global environmental initiatives and projects, such as SAARC, SACEP, SAWTI and CITES and benefit from established experience, mechanisms and protocols. It would also draw on strategic partnerships with renowned wildlife conservation institutions in the region and elsewhere. At the November 2010 among conservation officials from Bangladesh, Bhutan, India and Nepal – as the project's principal stakeholders – the participants expressed their commitment to the establishment of VRCE recognition of the need to share and promote knowledge and research.

14. *Governance and management of VRCE.* The Regional Operational Steering Committee (ROSC), described in Annex 3, would assist in the development of VRCE's overall program and objectives. VRCE would be managed by a director and this position is envisaged to rotate among the participating countries to assure appropriate ownership and representation. VRCE's director would be responsible for coordinating the development and implementation of the

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<sup>38</sup> These may include establishing a focal point within each agency or national multi-agency task forces as well as conducting cross-country, multiple agency training to bolster intra-agency cooperation. ICCWC may be able to contribute to the implementation of this sub-component.



regional work program for the VRCE and developing, in conjunction with the national counterparts, the country programs that would give VRCE its added value at the local level. VRCE's directorate would be housed within the PCU of each participating country during its tenure in managing VRCE that would coincide with its turn to chair the ROSC. In Bhutan, the WCD will host the VRCE directorate during Bhutan's tenure as the chair of the ROSC.

15. *Knowledge dissemination.* VRCE would develop an active knowledge dissemination program that may include: (a) publication of research and pilot project results; (b) sponsorship of workshops, lectures and seminars; (c) special seminars aimed at decision makers in the participating governments (legislators, administrators and policy makers); (d) training modules and teaching materials for wildlife managers; and (e) development of protocols for informing policy and wildlife managers in the field. Knowledge generation or research within the VRCE would focus primarily on conservation and species management research. Better management of PAs and their species as well as stronger conservation measures would enable the establishment and maintenance of systems and mechanisms to address the threats to wildlife due to poaching and illegal trade. VRCE could be used for coordination and collaboration at the country level in addition to the regional level. For all participating countries to benefit from the mentioned efforts, VRCE could sponsor the creation of a local networking forum in each country to facilitate exchange of research information, collaboration and coordination of country level institutions involved in wildlife conservation research. Coordination of the forum in Bhutan would be facilitated by WCD.

16. *South Asia Wildlife Enforcement Network (SAWEN).* During the first meeting of the South Asia Experts Group on Illegal Wildlife Trade in May 2010, the participating countries agreed on the structure, functions, and operational parameters for SAWEN along the lines of the Association of South East Asian Nations Wildlife Enforcement Network (ASEAN-WEN). SAWEN was formally established in January 2011 in Bhutan with an aim to strengthen regional law enforcement activities through bilateral and multilateral arrangements. If requested by the participating countries, support would be provided under the project for the institutional development of SAWEN.

**Sub-component 2.2 Competitive funding to support the management of protected areas (PAs) and government forest reserves (GFRs) with regional conservation benefits (US\$2.003 million)**

17. Geographically, the inter-connectedness of habitats and ecosystems between the countries in the region is well known – Nepal and India in the Tarai region; India and Bangladesh in the Sundarbans; and Bhutan and India in the Eastern Himalayas. The large mammals and flagship species are not confined according to administrative and national boundaries. Furthermore, population and development pressures are threatening the connectivity and integrity of wildlife corridors and linkages between PAs. Wildlife management and habitat conservation efforts undertaken in countries sharing ecological boundaries, including patrolling or interdiction of illegal activity and anti-poaching/trafficking operations need to be coordinated among countries to ensure that no actions in one country are detrimental to its neighbors. Therefore, a landscape approach to conservation planning would enable regional countries to move beyond focusing on their national PAs and boundaries.

18. While capacity to better address wildlife conservation and control illegal wildlife trade will be developed in Bhutan mainly through other development partners and nominally through this project, actual conservation and protection of the country's wildlife in general and its charismatic flagship species, in particular, will not take place unless prudent investments are made in the landscapes for conservation, protection and management of ecosystems. The focus of project support would be on investments that would result in improvements in PA and GFR protection and management that would contribute towards regional conservation benefits. Activities supported under this sub-component will complement other conservation efforts supported by development partners, international conservation NGOs and RGOB.

19. To foster ownership, efficiency and commitment on the part of the field based managers of the PAs and GFRs, a competitive demand-driven approach to interventions in PAs and GFRs would be applied. Funds would be allocated through an annual competitive call for: (i) proposals submitted from respective PAs and GFRs that promote demand-driven and decentralized approaches to conservation and management of natural ecosystems and would bring about regional conservation benefits; and (ii) proposals submitted for innovative pilot projects with regional applicability that address human wildlife conflict management, ecotourism development and greening of infrastructure in and around PAs and GFRs to enhance the conservation status of sensitive ecosystems. Proposals can be submitted by WCD individually or in collaboration with other stakeholders such as NGOs, research organizations or community groups.

***Window 1: Conservation, protection and management of protected areas and Government reserve forests for regional conservation benefits (US\$1.023 million)***

20. Priority PAs and GRFs with interconnected habitats and ecosystems with regional countries will be eligible for accessing funds under this window for activities in conservation, protection and management with ensuing regional conservation benefits. Interventions will be based on existing management plans or new ones prepared by WCD. Field-based PA and GRF managers are well acquainted with the challenges of protection, management and conservation as well as the local needs and conditions. Often, PA, and GRF managers are under-resourced and have limited incentives to meet centrally defined goals. To sharpen incentives, promote demand-driven interventions and encourage attention to regional conservation benefits, this window will provide funding for proposals submitted by field-based PA and GRF managers on a competitive basis. In order to ensure collaboration and complementarity in the management of adjacent PAs, and GRFs within the conservation landscape partnerships among PAs and GRFs will be encouraged to submit proposals, whenever possible. Competition among the applicants is expected to improve efficiency and promote more cost-effective and relevant interventions.<sup>39</sup>

21. DOFPS has identified the following criteria for selecting priority PAs and GRFs for project interventions under Window 1.

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<sup>39</sup> Such incentive-based approaches to conservation are being more widely used across the world (see, e.g., A. Arendodo, "Green Auctions", *Ecological Economics* (forthcoming), E Bulte and R Damania, 2002, "Modeling the Economics of Interdependent Species", *Natural Resource Modeling*, 16: 21-33; T. Cason and R Gangadharan, 2004, "A Laboratory Based Test of Conservation Auctions" *Journal of Environmental Economics and Management*, 46:446-57.

- PAs and GRFs with interconnected habitats and ecosystems with regional countries
- Areas with high levels of poaching and illegal wildlife trade
- Areas of high biodiversity significance
- Threatened ecosystems
- Locations with observed high presence of endemic species and/or flagship species
- Locations with potential for non-consumptive ecosystem services
- PAs and GRFs at risk of succumbing to surrounding development pressures
- PAs and GRFs with high nature based tourism activity and potential thus requiring intensive management

22. Window 1 would support activities that would promote conservation, protection and management of PAs and GRFs. Since RGOB has made a policy decision to utilize only grant funds for pure conservation investments, the main focus of activities supported under Sub-component 2.2 will be on investments to strengthen protection and management of PAs and GRFs. Therefore, priority will be given to the development of PA management offices, wildlife rescue centers, information/visitor centers and communication systems. Activities such as habitat management, species monitoring and endangered species recovery plans etc., will be supported through grant funds outside the framework of this project. This component will enhance DOFPS's ability to more effectively engage in conservation, protection and management of Bhutan's PA network. No major infrastructure that would have significant adverse environmental consequences within PAs and GRFs will be supported under the project. Any activity implemented within the PAs and GRFs would be required to undertake an environmental and/or social analysis in accordance with the Environmental and Social Management Framework prepared for this project and to prepare Environmental Management Plans to mitigate any adverse impacts.

***Window 2: Innovative pilot projects with a regional dimension (US\$0.98 million)***

23. Following the demand-driven approach for competitive funding, a second window would be established for innovative pilot projects that would advance the cause of wildlife conservation and PA management. This window would include funding for: (i) piloting or testing of human wildlife conflict management models that provide financial and other incentives for achieving human wildlife coexistence; (ii) identification and development of ecotourism opportunities, camping sites, nature trails, canopy walks, etc.; (iii) pilot programs in greening infrastructure in and around PAs and GRFs to enhance the conservation status of sensitive ecosystems; and (iv) pilot programs in conservation of endangered flagship species. Window 2 would focus on activities that contribute to *regional* conservation benefits. In addressing the human wildlife conflict and the development of ecotourism opportunities, greening infrastructure and conservation of endangered flagship species, a landscape approach would be required for funding under Window 2.

24. *Human-wildlife conflict (HWC) management.* Unlike in other countries, the declaration of PAs in Bhutan did not lead to any large-scale eviction of communities from the declared PAs as they were allowed to maintain their dwellings. However, restrictions or bans were introduced on traditional resource uses, shifting cultivation and hunting, extractions of timber and non-

timber forest products and grazing in community and reserve forests. The declaration of PAs led to increases in wildlife populations that resulted in greater threats to humans, crops and livestock. The resulting HWC has become a key social, political and environmental concern in Bhutan. It is also a leading threat to the long-term survival of endangered flagship species. In addition to conflicts with the flagship species, communities are confronted by other wildlife such as other carnivores, wild boar, ungulates and primates. The increasing severity of the problem led to WCD's preparation of the 2008 National Human Wildlife Conflict Management Strategy. The strategy will be the basis for the development of proposals to manage HWC under Window 2.<sup>40</sup>

25. Carnivore-human conflict (CHC) is a serious concern in Bhutan given the increasing trend of communities being affected by CHC. Carnivores such as the tiger, leopard, snow leopard, wild dog, bear and wolf are primary contributors to the conflict. These carnivores come in contact with humans mainly through predation of livestock. Carnivore attacks on humans are almost unheard of in Bhutan, except for the rare incidents of mauling. Pilot projects to address the conflict are urgently needed if the carnivore population, especially the charismatic and flagship species like is to be protected. Community participation in implementing the pilot projects is critical for long-term success. This would require: (i) awareness raising among the communities on the importance of conservation; (ii) training on techniques of handling stray carnivore intrusions to villages without harming charismatic species; (iii) establishment of an effective communication system between the community and the response teams from WCD; (for example, exploring the possibility of training select community members in basic immobilization techniques and containment until the response teams arrive, training for the response teams on safe tranquilizing and capture methods, etc). With the experience gained from implementing the pilots, they can be replicated to address CHC elsewhere in the country.

26. Human-elephant conflict (HEC) is escalating in the southern Dzongkhags close to the border areas with India with serious repercussions for both humans and elephants. Current approaches have done little to address the problems effectively. This is largely because there is a dearth of information on virtually all aspects of elephants in Bhutan. Translocations and elephant drives used as a HEC management tool in many countries have proven to be a costly failure to both humans and elephants. They have largely failed because the approach neglects the root causes of the problem. Most PAs are already at or even beyond carrying capacity and hold the maximum number of elephants they can support. Additionally, PAs are generally primary or mature forests and they provide sub-optimal habitat for edge species, such as elephants that prefer degraded forest habitats. There is a need, therefore, to find a new approach for HEC management by developing mechanisms that turn wild elephants from economic liabilities and the foes of local farmers to wild, living, communal and economic assets.

27. Through telemetry data on elephant movements and socio-economic assessments that can be supported under the project, human-elephant coexistence models can be developed. This will provide RGOB with a tremendous opportunity to pioneer new science and observation-based adaptive management approaches with the potential to convert HEC into one of human-elephant coexistence. The exact locations of the pilots would be determined during project implementation since telemetry data and socio-economic assessments need to be undertaken first

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<sup>40</sup> Bhutan National Human Wildlife Conflicts Management Strategy, Nature Conservation Division, Department of Forests, Ministry of Agriculture (2008).

to determine the most suitable pilot sites.

28. The destruction of farm crops and livestock is a serious threat to communities living in close proximity to wildlife in Bhutan. The project would support WCD's efforts to examine the current compensation schemes for those affected by HWC and propose revisions or modifications, if required. Incentive mechanisms such as crop substitutions, payments for environmental services, community insurance schemes etc., may be explored through HWC management pilot projects. Community consultations, education and awareness creation is of paramount importance to the success of the pilots. Consultations will be an ongoing activity throughout project implementation.

29. *Ecotourism development.* Wildlife is often seen as an economic liability and a drain on development. Numerous examples from places as diverse as Namibia to Australia have demonstrated that ecotourism can be used as a tool for turning wildlife from a liability to an economic asset that creates a powerful constituency in support of conservation. Bhutan's immense endowment of rare and charismatic species and unique ecosystems has much to offer by way of ecotourism potential.

30. However, experience suggests that great caution must be exercised in the design of such systems to ensure that they contribute to conservation and do not degrade the habitats upon which they depend (e.g., highly intrusive and poorly planned structures). A further risk emerges from the familiar "resource curse" phenomenon – where tourism acts like an enclave industry with revenues being exported out of the region and minimal benefits accruing to local populations. Communities need to be important beneficiaries of a sustainable and environmentally beneficial system. Well developed ecotourism can generate dual benefits in the form of improved conservation, a community of support for conservation and livelihood benefits, but there are also many examples of tourism depleting local resources and contributing little to conservation.<sup>41</sup>

31. Bhutan, more so than other countries in the South Asia region, recognizes the significance of developing regional, environmentally beneficial ecotourism. In view of the diversity of wildlife tourist assets, the typical pilot projects submitted to Window 2 could support assessments of the potential to develop ecotourism in ways that generate clear environmental benefits and create a pool of local support for conservation (for example, through benefit sharing, employment, etc.) in the areas identified. Good practices from elsewhere would inform the assessments. If the assessments indicate the potential for regional conservation benefits, the project could invest in developing such identified potential.<sup>42</sup> As it is, unplanned ecotourism is taking place already in sites adjacent to PAs and GRFs. Pilot projects under Window 2 could

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<sup>41</sup> Through the Critical Ecosystem Partnership Fund (CEPF, currently in its 10th year) and the Save Our Species program, the World Bank has identified the types of enabling conditions and articulated meaningful M&E structures that foster successful biodiversity sub-projects in large landscapes. In fact, CEPF is currently engaged in the Indo-Burma hotspot (Eastern Himalayas). The consensus-driven and participatory ecosystem profile that CEPF led to drive its investments and decision-making about priorities for conservation could provide guidance.

<sup>42</sup> This may include the creation of regional wildlife networks or "trails" i.e., NOT roads (pathways or other built intrusive structures) but information about opportunities and wildlife viewing towers across national boundaries that may include: a mammal trail (in a range of habitats across the countries to include tiger, rhino, elephant, red panda, leopard); bird-watching trails; botanical trails with a focus on the wild flowers of the Himalayan ranges.

assist in developing environmentally friendly ecotourism plans for those sites. Window 2 would support: (i) development of ecotourism plans with demonstrated regional environmental and conservation benefits; and (ii) implementation of priority activities under such plans with ensuing regional benefits for conservation.<sup>43</sup>

32. *Greening of infrastructure within and in close proximity to PAs areas and GRFs.* PAs in Bhutan include communities living within the PA system when such PAs were declared. Development of these communities involves the provision of infrastructure and services. RGOB has identified basic infrastructure development programs for communities within and adjacent to PAs and GRFs. Over the years it has become apparent that public works which support the way of life of communities in Asia, especially those living within or in close proximity to PAs, have contributed to the loss of the regions biodiversity. In Bhutan too, unless extreme care is taken when developing infrastructure for communities within and adjacent to PAs, irreversible damage to the environment and biodiversity is inevitable. Therefore, it is critical to ensure that any infrastructure development within or adjacent to PAs is smart, green and wildlife friendly.

33. Since traditional project based mitigation has proven to be less than sufficient in halting habitat fragmentation and reductions in wildlife populations, a multi level approach has been proposed for use by GTI's Smart Green Infrastructure (SGI) Working Group as the basis for planning, design and construction of infrastructure in sensitive ecosystems.<sup>44</sup> This sub-component could be used to ensure the construction of smart green infrastructure. Pilot projects that would have a demonstration effect on greening infrastructure within and adjacent to PAs will be eligible for support under Window 2. Planning will commence with the mitigation hierarchy of avoidance, minimization, rehabilitation/restoration and offset. By concentrating development in lower value habitats with existing human presence, higher biodiversity value areas, including core wildlife areas, can be spared for flagship species and provide critical ecosystem services. If successful, the pilot projects could generate valuable demonstration effects on future infrastructure development plans and programs in sensitive ecosystems in Bhutan.

34. *Pilot programs in conservation of endangered flagship species.* Conservation and species recovery plans have been prepared for most of the endangered flagship species, such as tiger, rhinoceros, snow leopard and elephant. But, in most cases, implementation of critical activities under these plans has not taken place due to lack of funding. Currently, there is no procedure or framework for the systematic assessment of priorities for endangered species management, development of management strategies, the linkages of in-situ and ex-situ conservation etc. Climate change has also resulted in reducing the habitat of the snow leopards and tigers living in high altitudes along with their prey species, severely endangering the future of the snow leopard and tiger in Bhutan. Window 2 will provide an opportunity for the development of a framework for a systematic assessment of priorities for endangered flagship species management and funding for pilot programs in priority areas of conservation of endangered species. WCD is encouraged to propose pilot programs in partnership with other

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<sup>43</sup> Such activities are likely to include small-scale ecotourism pilots and support for better regulation and management of existing facilities.

<sup>44</sup> Smart Green Infrastructure in Tiger Range Countries: A Multi-Level Approach, Quintero J., Roca R., Morgan A.J., and Mathur A., GTI – SGI Working Group, 2010.

stakeholders to demonstrate the potential for scaling up conservation models.

35. *Proposal review process.* A transparent and independent process would be established for reviewing proposals submitted to both windows for funding which is described in Annex 3. The specific eligibility criteria (including a negative list of activities) under each funding window will be stated explicitly in the OM and its completion would be a condition of disbursement.

### **Component 3: Project coordination and communication**

#### ***Sub-component 3.1: National and regional project coordination (US\$0.04 million)***

36. RGOB would appoint a Project Implementation Steering Committee (PISC) for oversight at the country level, chaired by the Secretary of MOAF and including a representative from the Ministry of Finance. The Chief Forest Officer in charge of WCD will be responsible for project implementation and oversight of the project's day-to-day operations. Project activities will be undertaken by WCD staff as part of their regular duties. Fiduciary oversight will be provided by staff in WCD and MOAF.

37. Financial support to Bhutan for regional coordination is required in order to closely coordinate regional activities across all participating countries. Details of the regional coordination mechanisms are described in Annex 3. In November 2010, conservation officials from Bangladesh, Bhutan, India and Nepal (as the project's primary stakeholders) met and expressed their commitment to join the proposed Regional Policy Steering Committee (see Annex 3) aimed at ensuring regional coordination as soon as the Committee is established.

#### ***Sub-component 3.2: National and regional project communications***

38. The project will adopt a multi-pronged approach to communications in order to meet regional and local challenges. The project will rely on the regular communications mechanism within WCD and DOFPS to meet the communication needs of the project. A wide range of consultations with various stakeholder groups will be conducted at the national and local levels. It is expected that rolling consultations will continue throughout the project cycle. The communications sub-component – that is being developed and implemented in collaboration with the World Bank's external relations specialists – will harmonize with GTI in view of the latter's broader geographic mandate to engage in demand side management.

## **Annex 3: Implementation Arrangements**

### **BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia**

1. The following institutional arrangements for regional project coordination and country-based project implementation have been agreed.

#### **A. Regional Level**

2. As stated in Section IV. A of the main text, the participating countries have agreed that a strong regional coordination mechanism would need to be in place to ensure the achievement of the PDO. Regional coordination would be exercised at two levels: (i) the policy level; and (ii) the operational level. At the policy level, a Regional Policy Steering Committee (RPSC) would be established. At the operational level, an Operational Steering Committee for Regional Coordination (OSCRC) of the project would be established. The OSCRC's main responsibilities are to ensure effective coordination of project activities that have regional implications and to foster dialogue on wildlife conservation issues among the participating countries. Any contentious issues that cannot be resolved by the OSCRC may be elevated to the RPSC for recourse. The project implementation/coordination units (PIU/PCU) in the participating countries chairing the RPSC and the OSCRC will serve as the secretariats to both committees.<sup>45</sup> In the case of Bhutan, Wildlife Conservation Division (WCD) will serve as the secretariat for both committees.

#### **B. Bhutan**

##### ***Project administration***

3. The main counterpart for the project would be the Ministry of Agriculture and Forests (MOAF). The project would be implemented through regular staff of the WCD in MOAF's Department of Forest and Park Services (DOFPS). Therefore, no separate project management unit will be established. Project implementation responsibility will rest with WCD's Chief Forest Officer. WCD has experience in managing externally financed projects with development partners such as UNDP, the Government of the Netherlands, WWF, DANIDA and Bhutan Trust Fund for Environmental Conservation. The fiduciary arrangements for the proposed project will be the same as those of other externally funded projects implemented by WCD.

4. A project implementation steering committee (PISC) – chaired by the Secretary of MOAF and including a representative of the Ministry of Finance – will be established and will be responsible for: (i) reviewing the quarterly and annual progress of the project based on reports prepared by WCD (see below); (ii) guiding WCD on project implementation; (iii) reviewing and approving updated procurement plans; and (iv) conducting independent field visits to the project areas to assess field implementation. Details of the implementation arrangements can be found

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<sup>45</sup> Coordination among the policy and operational regional committees, the PIU/PCUs and GTI will be encouraged.



in the Operational Manual (OM). A draft OM acceptable to IDA has been developed and completion of the final OM will be a condition of disbursement.

### ***Financial Management***

5. At the country level, improving public financial management and accountability is a central part of the reform program in Bhutan. Diagnostic studies conducted earlier by IDA and other donors have indicated that while the core elements of an effective financial management system are largely in place, several major challenges remain. Recently, RGOB implemented a Public Expenditure Management System (PEMS) that provides an improved platform for computerized budget and accounting systems which helps in monthly and annual reporting at the entity and the national level. External and internal audits are not as effective as they should be in ensuring that systems of internal financial controls work well. Also, the adoption of international accounting standards will help assure competent financial reporting and transparency. Finally, the capacity of the country's accountability and oversight institutions would need to be strengthened. There is a need to establish the necessary legal underpinnings to meet the demands for FM transparency arising from increased revenues and spending expected over the coming years. With these considerations in mind, RGOB has pursued several reforms. Many of the steps taken in the areas of budget execution, monitoring and cash management have produced visible positive results, and provide a strong trajectory for public financial management (PFM) improvement. RGOB has demonstrated its will to continue the PFM reforms, evidenced by the scale and variety of actions underway. Overall, the reform program in this area is progressing well although substantial further effort is needed for RGOB to meet its goals in substance as well as in form.

6. A capacity assessment of the FM arrangements of the WCD was carried out by a Bank FMS. At the project level, FM arrangements will follow RGOB systems for budgeting, funds flow and accountability. The budget for all project expenditures will be included in the overall budget of WCD as the project implementing agency. All eligible project expenditures, including those incurred by other spending units, such as the PAs and GFRs, will be accounted for and processed for payment through WCD. No direct flows of project funds to other stakeholders – participating or collaborating on any of the activities with their own funds – will take place.<sup>46</sup> Overall, the residual financial management (FM) risk for the project is assessed as “Substantial”, but is expected to be “Moderate” after the mitigation measures listed below are adopted. The FM arrangements are described in detail in the OM.

7. *Staffing.* The accounting and financial reporting functions at WCD will be managed by the existing accounting staff. Because of the project's regional scope, an experienced and well trained FMS from the existing staff – acceptable to IDA – will be assigned by WCD prior to negotiations. IDA staff must train the FMS on FM procedures required by IDA by September 30, 2011. WCD will have the primary responsibility of: (i) routing all fund requests to the Department of Public Accounts (DPA) and tracking the fund releases; (ii) reconciling the Designated Account (DA); and (iii) preparing and submitting quarterly consolidated interim financial reports to IDA.

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<sup>46</sup> These include development partners, international NGOs and local communities.

8. *Budget.* The project will be budgeted within WCD's overall budget under a separate Financing Item Code (FIC). The activity/sub-activity codes will allow for all project-related expenditures to be separately identified, accounted and reported in the PEMS reports as well as in the interim unaudited financial reports (IUFs). The clear identification of project components and sub-components within the PEMS will simplify project financial reporting. It was agreed that the draft annual budget for the project will be shared with IDA and the latter will provide comments.

## **Accounting**

9. Accounting for project expenditures will be maintained on a cash basis in PEMS itself and no separate project level accounting will be required. The prevailing rules of RGOB, i.e. Financial Rules and Regulations (July 2001), will apply to all project expenditures. Key FM aspects are as follows:

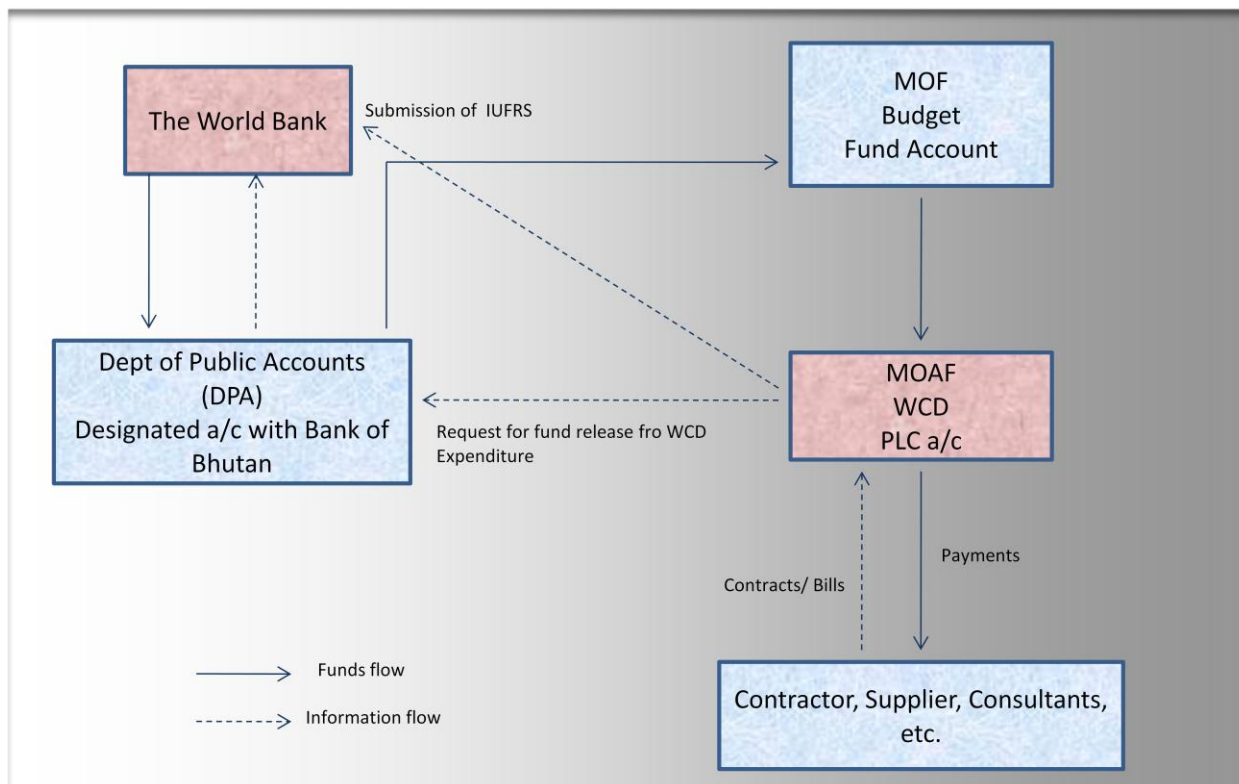
- All payments to contractors, consultants and suppliers against invoices and running bills are considered as expenditure, other transfers inter departments or spending units are considered as advances.
- Mobilization advances, etc. are accounted for in PEMS under 'Suspense' and adjusted with expenditures as when these are adjusted with the running bills.
- All sources of funds and all expenditure, advances will be reflected in the project's financial statements.
- Expenditure booked in the PEMS will be the eligible amount for Bank financing.
- Standard Books of Account/ Records will be maintained at WCD. A register of fixed assets, indicating assets created/acquired through the project will also be maintained. Particular attention will be given to maintenance of works and contractor's registers; and
- WCD will be responsible for verifying payment certificates submitted by contractors and for certifying verified payments.

10. *Designated account, fund flows and financial reporting.* Project funds will be deposited in advance into the Designated Account denominated in Ngultrum (local currency) to be opened at the Bank of Bhutan. All project activities will be funded by the IDA credit. The DA will be segregated and used only to deposit advances for the project. The DA will be operated by the DPA in the Ministry of Finance (MOF). Funds will be withdrawn from the DA on an "as required" basis and transferred to the government budget fund account (GBFA) by the DPA as an advance. These transfers are based on requests from WCD to meet its own requirement. All requests for fund releases from WCD will be routed through MOAF. Based on the requests, the DPA in the MOF will release funds to the Project Letter of Credit (PLC) account of [WCD](#).

11. WCD will issue checks against the PLC to meet the project expenditures and to account for the same in PEMS. On a monthly basis, WCD will submit a copy of the financial report generated from the PEMS to MOAF. The WCD will also consolidate the information and prepare financial management reports (IUFs), in form and contents of which will be agreed with IDA before project negotiations. Replenishments into the designated account will be based on interim unaudited financial reports and will be processed by DPA on a quarterly basis. The interim unaudited financial reports will provide information on expenditure made in the previous

quarter and forecast for two subsequent quarters. Quarterly disbursements would be made based on these financial reports, providing funds for two subsequent quarters after adjustment for past disbursements.

**Figure 3.1 Bhutan: Flow of Funds and Information**



12. *Internal control.* RGOB’s 2001 Financial Rules & Regulations (FRR) provides the required control framework for procedural transaction control over individual items of expenditure and receipts. The FRR provides detailed guidance on internal controls including safeguarding of cash, control over inventories, segregation of duties and delegation of authority for approvals and operating the bank accounts. The FRR specifies the segregation of duties and defines the responsibilities and steps required to process financial transactions. Project specific procedures will be further detailed in OM. Completing the OM is a condition of disbursement.

13. *Internal audits.* It has been agreed that the internal auditor of MOAF will review project activities of each spending unit. MOAF has also agreed that any exceptional internal audit reports on project activities will be made available to the Royal Audit Authority (RAA) and IDA during project review/supervision.

14. *External audit.* Consolidated annual project financial statements will be audited each year by RAA, the supreme audit institution in Bhutan, which is acceptable to IDA. The format will include consolidated financial statements for the project along with a statement reconciling credit disbursements against claims submitted to IDA and balances available in the Designated

Account, as reported in the interim unaudited financial reports, as well as a management letter. WCD will be responsible for submitting the consolidated annual project financial statements to RAA by September 30 of each financial year. The consolidated financial statements submitted by the WCD for the purposes of audit will include an assurance from the management on the correctness, completeness and confirm the use of project funds for intended purposes. The terms of reference (TORs) for the audit are subject to agreement by IDA and RAA.

Coordinating Agency	Audit Type	Auditor	Deadline
WCD	Annual project financial statements, including Designated Account	Royal Audit Authority	December 31 of each year

15. *Supervision plan.* Initially, supervision will focus on: compliance with all agreed actions, terms, and conditions by the project's FM staff, identification of any FM or disbursement issues during project implementation and agreement on redress measures.

### **Disbursement**

16. The project duration would be five years. Project funding will consist of an IDA credit of US\$2.25 million. IDA will finance 100% of costs, including taxes, for each expenditure category. The project will disburse on the basis of interim unaudited financial reports (IUFs). Table 3.2 shows the IDA financing under the various expenditure categories.

**Table 3.2 Bhutan: Allocation of IDA Credit Proceeds**

Description	Project Cost (In US\$)	Financing (In % including taxes)
1. Goods, works, consultant services, training and workshops, operating costs* for all parts of the project <i>excluding</i> Windows 1 and 2 of Component 2	147,113	100%
2. Goods, works, consultant services, training and workshops, operating costs* for Windows 1 and 2 of Component 2	2,102,887	100%
Total	2,250,000	100%

\* Operating costs would apply to Components 1 and 3 as well as the operations of the VRCE. Procedures for disbursement of funds for Category 2 is summarized in paragraphs 34 and 35 and detailed in the OM.

**Table 3.3 Bhutan: Financial Management Action Plan**

Action	Responsibility	Completion Date
1. Finalize the OM	WCD	Condition of disbursement
2. Train the FMS in FM procedures as required by RGOB through exposure to other IDA-funded projects in Bhutan and by IDA	WCD/IDA	By September 30, 2011

## ***Procurement***

17. All procurement for the proposed project will be carried out in accordance with the IDA Procurement Guidelines and the Consultant Guidelines of January 2011 and the provisions stipulated in the Financing Agreement (FA). The various items under different expenditure categories are described in general below. For each contract to be financed by the IDA credit, the procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and IDA in the Procurement Plan. The plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

18. *Procurement of goods.* Goods procured under this project would include: equipment for the information/intelligence networks of both WCD and the VRCE, and any equipment that would be included under Windows 1 and 2 proposals. The procurement will make use of IDA's standard bidding documents (SBD) for all National SBD agreed with or satisfactory to IDA.

19. *Procurement of works.* Works to be procured under this project would be included in the proposals to be submitted under Windows 1 and 2 and is expected to consist of minor roads, drains, paved roads, footpaths, slight refurbishment of buildings and other small infrastructure activities connected with WCD. The procurement will be done using IDA's SBDs for all ICB and SBD agreed with or satisfactory to IDA.

20. *Procurement of non-consulting services.* This will entail short-term training to WCD staff to augment their technical skills.

21. *Selection of consultants.* Consultants will be hired for strengthening enforcement. Consultancy services will also be hired to provide technical assistance to WCD and to review proposals submitted to the two windows. The shortlist of consultants for services estimated to cost less than US\$200,000 or equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

22. *Operating costs.* The project will support incremental operating costs associated with Components 1 and 3 as well as the VRCE including communication expenses, vehicle rental and fuels for coordination activities, office supplies, and remunerations for contractual staff, if any.

23. *Capacity assessment.* Procurement activities will be carried out by the procurement unit in MOAF which is responsible for all procurement activities of the Ministry. This unit has experience with procurement for projects financed by development partners. An assessment of the unit's capacity to implement procurement actions for the project has been carried out by IDA's Procurement Specialist in April 2011. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement and MOAF's relevant central unit for administration and finance.

24. The key issues and risks concerning procurement during project implementation have been identified, which include the need for training MOAF staff. Procurement training is expected to be provided by the Bank's procurement specialist. Procurement procedures to be

established for the project have been documented in the draft OM. The training needs will be assessed at periodic intervals and necessary training will be provided by IDA’s procurement specialists. The overall project risk for procurement is “High” and is expected to be rated “Substantial” with the agreed mitigation measures.

<b>Procurement Risks</b>	<b>Mitigation Measures during Preparation</b>	<b>Mitigation Measures by Effectiveness</b>	<b>Mitigation Measures during Implementation</b>
Weak procurement capacity within MOAF/WCD and inadequate knowledge of IDA’s procurement and consultant guidelines	Identify a suitable staff member within MOAF/WCD to handle procurement activities	Provide procurement training to the identified staff	<ul style="list-style-type: none"> <li>• Regular and ad-hoc trainings on IDA procurement policies and procedures by IDA’s procurement specialist</li> <li>• MOAF’s Procurement Specialist to attend procurement training</li> </ul>
WCD does not have a procurement planning process.	Prepare draft procurement plan.	Update the detailed procurement plan for the first eighteen months of the project.	<ul style="list-style-type: none"> <li>• Close monitoring of implementation of procurement plan by IDA task team</li> <li>• Regular support, guidance, supervision by IDA’s Procurement Specialist during implementation</li> </ul>
WCD does not have written procedures and guidelines for procurement activities.	Prepare the procurement section of the OM.	Procurement guidelines and procedures to be documented in the OM. Follow up closely and discuss anti-corruption guidelines and include provisions related to disclosure of conflict of interest, code of ethics for evaluation committee in the OM.	<ul style="list-style-type: none"> <li>• Update the OM as needed.</li> </ul>

**Table 3.4 Bhutan: Procurement Management Action Plan**

<b>Action</b>	<b>Responsibility</b>	<b>Completion Date</b>
1. Finalize OM (procurement section)	WCD	Condition of disbursement
2. Provide training in procurement procedures required by IDA to the assigned PS	WCD/IDA	By September 30, 2011

25. *Procurement plan.* During appraisal, the Borrower developed a procurement plan for project implementation which provides the basis for the procurement methods. The plan will be agreed between the Borrower and IDA during technical discussion/negotiations. It will also be

available in the project's database and IDA's external website. The procurement plan will be updated in agreement with IDA annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

### ***Procurement thresholds***

26. *Goods and equipment.* No procurement requiring international competitive bidding (ICB) is anticipated. However, contracts for goods and equipment above US\$ 200,000 equivalent (if required) will be procured following IDA's ICB procedures and IDA's approved SBDs. Contracts between US\$200,000 and US\$30,000 equivalent will be procured following national competitive bidding (NCB) procedures and IDA's approved SBDs and contracts below US\$30,000 equivalent may be procured following Shopping procedures. Proprietary items and software which meet the requirements of Clause 3.7 of the Procurement Guidelines may be procured following direct contracting with IDA's prior agreement.

27. *Works.* ICB procurement is not anticipated. Contracts less than US\$1 million and above US\$30,000 equivalent will be procured following NCB procedures and using IDA's approved SBDs and contracts below US\$30,000 or its equivalent will be procured through Shopping.

28. *Consultant services.* Procurement of consultants shall follow IDA's standard documents and Guidelines for Selection and Employment of Consultants of January 2011. Except as provided in the following paragraphs, consultant services shall be procured under contracts awarded in accordance with the provisions of paragraphs 2.1 through 2.35 of the Guidelines applicable to quality and cost based selection (QCBS) of consultants. Short lists of consultants for services estimated to cost less than US\$200,000 equivalent per contract may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 and foot note 32 of the Consultant Guidelines.

29. Services for assignments agreed to by IDA must meet the requirements set forth in the corresponding paragraphs under Section III of Consultant Guidelines. They may be procured through quality based selection (QBS), least cost selection (LCS), and selection under a fixed budget (FBS). Services estimated to cost less than US\$100,000 per contract, may be procured under contracts awarded in accordance with the provisions of paragraphs 3.1 and 3.7 of the Consultant Guidelines following selection based on consultant qualifications (CQS). Services estimated to cost less than US\$100,000 per contract, may be procured in accordance with the provisions of paragraphs 3.9 through 3.11 of the Consultant Guidelines following single source selection (SSS) with IDA's agreement.

30. Assignments that meet the requirements set forth in Section V of the Consultant Guidelines may be procured under contracts awarded to individual consultants. Selection of individual consultants on sole source basis that meet the requirements of paragraph 5.4 of Consultant Guidelines shall be subject to prior IDA approval.

31. *Methods, thresholds and prior review for goods, works and services.* The procurement threshold and prior review by IDA as stated in Appendix 1 to the Procurement Guidelines is shown in the following table.

No.	Method of Procurement	Threshold	Prior Review Threshold
1	ICB and Limited International Bidding (LIB) [Goods]	More than US\$200,000	More than US\$200,000
2	ICB [Works]	More than US\$1,000,000	More than US\$1,000,000
3	NCB [Goods]	More than US\$30,000 and less than US\$200,000	More than US\$100,000
4	NCB [Works]	More than US\$30,000 and less than US\$1,000,000	More than US\$200,000
5	Shopping [Good and works]	Less than US\$30,000	All post review
6	Direct Contracting		All prior review
7	Consulting Firm		More than US\$200,000
8	Individual Consultant		More than US\$50,000
9	Single Source Selection		All subject to prior review

32. *Frequency of procurement supervision.* In addition to the prior reviews to be carried out from IDA offices, the IDA team will carry out post reviews of procurement activities in the field on an annual basis. Supervision missions are proposed to be conducted twice a year.

33. *Basic principles of NCB procedures.* These are listed below.

- Only the model bidding documents for NCB agreed with the GOI Task Force (and as amended for time to time), shall be used for bidding.
- Invitations to bid shall be advertised in at least one widely circulated national daily newspaper, at least 30 days prior to the deadline for the submission of bids.
- No special preference will be accorded to any bidder either for price or for other terms and conditions when competing with foreign bidders, state-owned enterprises, small scale enterprises or enterprises from any given state.
- Except with prior concurrence of IDA, there will be no negotiation of price with the bidders, even with the lowest evaluated responsive bidder.
- Extension of bid validity shall not be allowed without the prior concurrence of IDA (i) for the first request for extension if it is longer than four weeks; and (ii) for all subsequent requests for extension irrespective of the period.
- Re-bidding shall not be carried out without the prior concurrence of IDA. The system of rejecting bids outside a pre-determined margin or "bracket" of prices shall not be used in the project;
- Annual rate contracts entered into by the implementing entity shall not be acceptable as a substitute for NCB procedure; such contract shall be acceptable as one of the quotation under shopping.
- Two or three envelope system will not be used.
- As per paragraph 1.14(e) of the IDA Procurement Guidelines, IDA's right to inspect the accounts and records of bidders, suppliers and contractors will be included in the bidding documents.



## ***Procurement Arrangements***

### ***Goods***

<b>Description</b>	<b>Estimated Cost (US\$)</b>	<b>Procurement Method</b>	<b>Domestic Preference (yes/no)</b>	<b>Review by Bank (Prior/ Post)</b>	<b>Comments</b>
Equipment for information/ enforcement units	19,000	Shopping	No	Post	
Equipment for VRCE	3,800	Shopping	No	Post	
Equipment for development of the national anti-poaching and enforcement database	11,000	Shopping	No	Post	

### ***Consultants***

<b>Description of Assignment</b>	<b>Estimated Cost (US\$)</b>	<b>Selection Method</b>	<b>Review by Bank (Prior/ Post)</b>	<b>Comments</b>
Local consultant to assist the IC	9,500	IC	Post	
Consultant to review proposals	2,850	IC	Post	
Consultant to review proposals	2,850	IC	Post	

## **C. Funding Review Process for Innovative Pilot Projects Submitted to Windows 1 and 2 of Sub-component 2.2**

34. The proponents of project proposals under the two windows of Sub-component 2.2 will be responsible for the submission of their respective applications to the Regional Proposal Review Committee (RPRC). The RPRC will have regional representation to ensure that only proposals with regional dimension are funded under the sub-component. The RPRC will comprise representatives from the governments of the participating countries and non-governmental technical experts (who would form a majority of the committee). If a particular proposal presents a conflict of interest vis-à-vis a committee member, the latter will have to recuse oneself from the evaluation and approval process for that proposal. Calls for proposals will be issued annually and applications will be subject to a virtual review by the RPRC.

35. Funded proposals, progress reports and final reports will be available to the public on VRCE's website. The pilot project implementation period will be two years. The proposal review and approval process will consist of two stages. Stage 1 will involve the approval by the RPRC of a concept note with a proposed budget. Once the concept is approved in Stage 1, the proponent will be required to re-submit a more detailed proposal that includes a detailed budget, procurement plan, implementation arrangements and environmental and social safeguards assessments (in accordance with the requirements of the Environmental and Social Assessment

and Management Frameworks) for final approval to the RPRC and for concurrence by IDA. Upon approval, funds would be provided to the proponent for the implementation of the pilot project. No funds can be disbursed under this sub-component without IDA's no objection. IDA will assess the compliance of the proposals with the overall objectives of the sub-component and their sustainability prior to approval.

## Annex 4: Operational Risk Assessment Framework (ORAF)

### BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia

**Project Development Objective(s): To assist the participating governments to build or enhance shared capacity, institutions, knowledge and incentives to collaborate in tackling illegal wildlife trade and other selected regional conservation threats to habitats in border areas.**

<b>PDO Level Results Indicators:</b>	1. Progress towards the development of sustainable regional mechanisms for addressing illegal wildlife trade and other conservation threats.
	2. Development of at least one protocol each on a common research agenda, knowledge sharing, collaboration and division of labor.
	3. Agreement among enforcement agencies on at least two regional protocols, including approaches and solutions.
	4. Implementation of at least three regional pilots or initiatives in wildlife enforcement and conservation.
	5. Improvement of Bhutan's capacity to fight wildlife crime through the development of information/intelligence networks and to boost conservation through better PA management and training to staff in the relevant agency.

Risk Category	Risk Rating <sup>47</sup>	Risk Description	Proposed Mitigation Measures
<b>1. Project Stakeholder Risks</b>			
1.1 Stakeholder	Medium-I	<p>Withdrawal of support or commitment by any government of the participating countries (Nepal, Bangladesh and Bhutan) or those likely to participate (India), due to factors, such as opposition by some individuals of considerable influence and some NGOs in India to IDA's involvement in wildlife conservation in the region. Legacy issues also pose reputational risk to IDA.</p> <p>IDA may also be criticized for supporting ineffective or controversial enforcement programs.</p> <p>Stakeholders are likely to have high expectations for quick results and any slow project start-up could create reputational risks to IDA.</p>	<p>1. Continuous dialogue on wildlife conservation with the participating governments will be conducted.</p> <p>2. TRAFFIC has been engaged in the design/development of Component 1 (capacity building and training program for addressing the trans-boundary illegal wildlife trade).</p> <p>3. Regular consultations with conservation NGOs will be carried out throughout project preparation and implementation.</p> <p>4. A proactive communications plan on addressing the illegal wildlife trade and enhancing conservation has been developed and will be adjusted proactively during</p>

<sup>47</sup> Rating scale: Low = Low impact/Low likelihood; Medium-L = Low impact/High likelihood; Medium I = High impact/Low likelihood; High = High impact/High likelihood

			implementation.  5. IDA will provide intensive implementation support to Bhutan's Wildlife Conservation Division (WCD) and the respective implementing agencies of other participating countries.
<b>2. Implementing Agency Risks (including FM &amp; PR Risks)</b>			
Summary	Medium-I	The following factors could result in slow implementation: (i) lack of adequate project management capacity within Bhutan's Ministry of Agriculture and Forests (MOAF), including WCD and the implementing agencies in the other countries; (ii) number of implementing agencies across countries; (iii) almost non-existent joint decision-making and collaboration within countries and across borders; (iv) possible coordination problems vis-à-vis the regional governance structures; (v) risk of systemic corruption due to lack of capacity in enforcement agencies.	The following mitigation measures would help with cross-country coordination and progress of a regional operation, such as this project: (i) creation of regional governance structures; (ii) country-based PIU/PCUs, including WCD in Bhutan, to receive significant TA, training and separate implementation budgets; (iii) support for monitoring of overall coordination; (iv) development of regional protocols, enforcement standards, best practice applications and shared knowledge and research; (v) joint adoption of standards and best practices; (vi) actions to mobilize internal and external integrity mechanisms (e.g. third party monitoring); (vii) monitoring of participating countries' compliance with their commitments to international treaties; (viii) support to implementation of IDA's Anti-Corruption Guidelines; (ix) proactive disclosure of important information on project activities and agency performance; and (x) promotion of communications strategy to improve transparency and demand for good governance.
<b>3. Project Risks</b>			
3.1 Design	High	The need for multiple agencies and for increased regional cooperation vis-à-vis wildlife protection has resulted in a somewhat complex project design with a large number of activities in each country. Slow decision making by the participating governments including Bhutan, WCD and other implementing agencies to agree on consistent implementation arrangements (e.g. testing of new methodologies for detection and repression of illegal trade) may delay preparation and implementation.  The design of the competitive funding mechanism for	1. Project activities – with regional scope and impact – will be implemented within the countries. The project design will be flexibly adapted based on implementation experience; this would also apply to the readiness of SA-WEN to become operational.  2. High level steering committees in each country, including Bhutan's Project Implementation Steering Committee (PISC) will facilitate coherence and coordination. In addition, the Regional Policy Steering

		Bhutan's protected areas (PAs) and government forest reserves (GFR) management and innovative pilot projects precludes meaningful community consultations until proposals for the funding windows are developed.	<p>Committee and the Operational Steering Committee for Regional Coordination will provide coherence in the approach across the participating countries.</p> <p>3. Active and ongoing consultations with local communities are an integral part of the design and preparation of the proposals for the funding windows. As part of the project's integrity mechanisms, third party monitoring by NGOs and civil society would be carried out.</p> <p>1. Consultations with conservation NGOs and other civil society organizations will be carried out with respect to potential project sites.</p>
1.2 Social & Environmental	Medium-L.	<p>Project activities include capacity building (training, regional database creation and monitoring, information and intelligence gathering and data sharing protocols), forensic improvements, communications infrastructure and investments resulting in regional benefits.</p> <p>Tensions between conservation efforts and traditional forest-based livelihood patterns of local communities may emerge.</p>	<p>1. Only works with no irreversible safeguard implications will be carried out in the project.</p> <p>2. The project will not support the construction of new major infrastructure in the PA networks. (Also, there will be no investments in wildlife habitats in India, if it were to participate in the project.)</p> <p>3. A screening mechanism and a negative list of investments are being considered or developed.</p> <p>4. Project implementation will include periodic consultations as well as information and education campaigns with relevant stakeholders. MOAF will conduct policy dialogue on benefits-sharing regime with the goal of shifting benefits to affected communities.</p>
1.3 Program & Donor	Medium-L	Implementing agencies may not have the commitment and capacity to sustain the activities of SAWEN or those related to meeting CITES requirements or other international protocols after project completion.	<p>1. Arrangements for the regional mechanism, including the readiness of SAWEN to become operational under Component 1, will be managed judiciously during preparation and implementation.</p> <p>2. The project will support the development of analytical and operational protocols toward meeting CITES requirements and strengthening linkages with other international efforts.</p>
1.4 Delivery Quality	High	Capacity of WCD and other implementing agencies to manage implementation schedule and milestones may	1. Project will support capacity building for M&E, as well as for contract management.

		<p>remain weak, also representing a risk to the sustainability of the gains made. WCD and other implementing agencies have limited capacity for contract management. Also, they may not sustain the M&amp;E capacity built during implementation.</p> <p>Future funding to sustain the project is not assured.</p> <p>Sustainability of enhanced integrity mechanisms and regional harmonization is not assured.</p>	<p>2. Project implementation for the activities in Bhutan are embedded in an existing institution (i.e., WCD) that would ensure mainstreaming of practices and standards.</p> <p>1. Three types of actions will be pursued to address funding risks: (i) dialogue with Bhutan and the other governments on future budget allocations to implementing agencies throughout implementation; (ii) future funding through partnerships with international NGOs and global initiatives that would be part of the mandates of the implementing agencies; and (iii) possible use of ecotourism revenues to finance a proportion of the enforcement costs.</p>
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<b>Overall Risk Rating at Preparation</b>	<b>Overall Risk Rating During Implementation</b>	<b>Comments</b>
High	High	<p>The “high” risk rating during project preparation is associated with the multiplicity of implementing agencies with weak capacity across the participating countries, the need to mobilize strong integrity mechanisms to tackle illegal wildlife trade at the national and regional levels and the risk of systemic corruption in targeting illicit wildlife trade.</p> <p>The “high” risk rating during implementation reflects the project’s complexity, weak capacity of the implementing agencies, introduction of new approaches to facilitate regional harmonization, create regional enforcement standards, develop best practice applications and share successful schemes, and the risk of corruption on account of the illicit nature of wildlife trade.</p>

## **Annex 5: Implementation Support Plan**

### **BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia**

#### **A. Strategy and Approach for Implementation Support**

1. The strategy for implementation support has been developed based on the nature of the project and its risk profile. It will aim at making implementation support to the client more flexible and efficient, and will focus on implementation of the risk mitigation measures defined in the ORAF.

- *Procurement.* Implementation support will include: (a) providing training to MOAF's procurement staff; (b) reviewing procurement documents and providing timely feedback to MOAF; (c) providing detailed guidance on IDA's Procurement Guidelines to MOAF; and (d) monitoring procurement progress against the detailed procurement plan.
- *Financial management.* Supervision will review the project's financial management (FM) systems, including but not limited to, accounting, reporting and internal controls. Supervision will also cover pilot projects on a random sample basis.
- *Governance.* The IDA team will supervise the implementation of the agreed governance steps in the Financing Agreement (FA) and provide guidance in resolving any issues.

#### **B. Implementation Support Plan**

2. Because this is a high risk project with extraordinary visibility vis-à-vis external partners and substantial work and follow-up are needed during implementation, the IDA team would need significant resources (above the norm) to carry out proper implementation support. The Task Team Leader for the APL is based in the South Asia Region. Formal supervision and field visits will be carried out semi-annually. The visits to Bhutan will be conducted in close coordination with the supervision of APL phases in other participating countries in order to take advantage of efficiency gains that may emerge from fielding joint missions. Detailed inputs from the IDA team are outlined below:

- *Fiduciary requirements and inputs.* Training will be provided by IDA's FM and procurement specialists to MOAF before the commencement of project implementation. The IDA specialists will also help MOAF identify capacity building needs to strengthen FM capacity and to improve procurement management efficiency in participating agencies, where applicable. Since the FM and procurement specialists are based in the country offices, they are expected to provide timely support. Formal supervision of FM will be carried out semi-annually, while procurement supervision will be carried out on a timely basis as required by MOAF
- *Safeguards.* Inputs from the environment and social specialists are required, though the project's social and environmental impacts are limited and client capacity is generally adequate. Training of relevant staff from the implementing agencies is required on environmental monitoring and reporting. Depending on the scope of the pilot projects

under Component 2, community/civil society consultations may require the inputs of the social specialists. Field visits would be carried out on a semi-annual basis. The social and environmental specialists are based in the country offices.

- *Operation.* Operations officers based in the country offices will provide day-to-day supervision of all operational aspects as well as coordination with the clients and among IDA team members.
3. The main focus of implementation support for both countries is described below. Other experts (e.g. wildlife trade, governance) would be tapped as needed.

<b>Time</b>	<b>Focus</b>	<b>Resources Estimate</b>	<b>Partner Role</b>
First Twelve Months	Procurement review and training	Procurement Specialists 4 SWs	NA
	FM review and training	FM Specialists 4 SWs	NA
	Environmental supervision	Environmental Specialists 3 SWs	NA
	Social supervision	Social Specialists 3 SWs	NA
	Supervision of technical and implementation arrangements	Operations Officer 4 SWs	TBD
	Team leadership	TTL 6 SWs Co-TTL 3 SWs	NA
	Communications	Communications Spec. 2 SWs	TBD
12-56 Months	Procurement review and supervision	Procurement Specialists 2 SWs	NA
	FM review and supervision	FM Specialists 2 SWs	NA
	Environmental supervision	Environmental Spec. 2 SWs	NA
	Social supervision	Social Specialists 2 SWs	NA
	Technical and implementation arrangements	Operations Officer 4 SWs	TBD
	Team leadership	TTL 6 SWs Co-TTL 3 SWs	NA
	Communications	Communications Spec. 2 SWs	TBD

Note: SW = staff week

4. Staff skills mix required is summarized below.

<b>Skills Needed</b>	<b>Number of SWs</b>	<b>Number of Trips</b>	<b>Comments</b>
Procurement Specialists	4 SWs first year and then 2 SWs annually	Field trips as required	Based in SAR country offices
FM Specialists	4 SWs first year and then 4 SWs annually	Field trips as required	Based in SAR country offices
Environmental and Social Specialists	6 SWs first year and then 4 SWs annually	Field trips as required	Based in SAR country offices
Operations Officer	4 SWs first year and subsequent years annually	Field trips as required	Based in SAR country offices
TTL/Co-TTL	9 SWs first year and subsequent years annually	2 trips annually	Colombo/Washington
Communications staff/consultants	2 SWs first year and subsequent years annually	1 trip annually	SAR country offices and Washington



## Annex 6: Team Composition

### **BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia**

**IDA staff and consultants who worked during the preparation of the APL's second phase:**

<b>Name</b>	<b>Specialty</b>	<b>Inst. Code.</b>
Sumith Pilapitiya	Lead Environmental Specialist (TTL)	SASDI
Marinela Dado	Sr. Operations Officer	SASDI
Hiran Herat	Project Implementation (Consultant)	SASDI
Sascha Djumena	Regional Specialist	SACIA
Darshani DeSilva	Environmental Specialist	SASDI
Klas Sander	Natural Resources Economist	ENV
Priya Chopra	Program Assistant	SASDI
Kishor Uprety	Sr. Counsel	LEGES
Junxue Chu	Sr. Finance Officer	CTRFC
Chau-Ching Shen	Sr. Finance Officer	CTRFC
Kumaraswamy Sankaravadivelu	Procurement Specialist	SARPS
Savinay Grover	Financial Management Specialist	SARFM

## **Annex 7: Staff Capacity Building and Training Program**

### **BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia**

1. This annex was prepared by TRAFFIC, the global wildlife trade monitoring network.<sup>48</sup> It presents a general framework for capacity building. The components and approach for each country's training program would be tailored according to the needs and experience of WCD, other PIU/PCUs, etc.

#### **A. Design Brief**

##### *Introduction*

2. Lack of adequate capacity is a major handicap for enforcement agencies engaged in curbing wildlife crime and illegal trade across Asia. Training as a tool for capacity building to improve law enforcement, has to be accurately targeted to the correct user groups i.e. those that carry out actual enforcement of the law. In order to address this need adequately and address the wider issues of building in-house capabilities and better coordination amongst enforcement agencies, it is important to begin with an assessment of existing capacity in wildlife law enforcement and identify where the gaps in capacity and knowledge are.

##### *Needs assessment methodology*

3. A needs assessment can be carried out in a number of ways including face-to-face interviews, surveys or workshops. Design should be participatory; that is, they should include representatives of key stakeholder groups from the start. Once the approach has been agreed upon, the target audiences of the assessment need to be identified and the questions to be asked need to be determined. There is a great deal of benefit to carry out such a needs assessment at a workshop. This ensures all agencies are involved in the process at the same time and leads to a greater understanding between agencies of their needs, and is also a good starting point for 'buy-in' to building better inter-agency co-operation. Although organizing a workshop can be time consuming and costly, the results of the needs assessment can be obtained more quickly and the level of input from each agency is much higher than would have been obtained by survey alone.

##### *Target Audiences*

4. Representatives from all law enforcement agencies that are responsible for wildlife conservation and the control of the illegal wildlife trade are the target audience. Within each agency, it is important to get feedback from staff from different levels of the organization – those who carry out the work on the ground, middle management and senior management. Consideration also needs to be given to related sectors of government that are responsible for allocation of resources for such activities. The assessment looks to establish a baseline of information from which an integrated multi-agency capacity building program can be designed.

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<sup>48</sup> TRAFFIC's website address: <http://www.traffic.org>.

### ***Problem assessment***

5. The needs assessment should include both analysis of the problem to be tackled and review of current capacity to address the problem. For the problem assessment, a rapid evaluation of historical, current and project wildlife trade trends should be carried out and it ought to include both legal and illegal components of the trade, species involved, conservation impacts, trade and value chain overview, related private sector structures and any information on responses to date to past regulatory or non-regulatory (e.g., awareness raising interventions by government and civil society).

### ***Capacity review***

6. It is necessary to gather information on the roles and functions of each agency and their involvement in wildlife conservation and combating illegal wildlife trade. This request for information can be broken down into a number of sections, such as:

- Levels of staff within the agency
- Levels of resources (human/equipment)
- Organization of the agency (intelligence/investigations/operations)
- Levels of cooperation, coordination and collaboration with other agencies (joint investigations/operations)
- Knowledge of the roles and responsibilities of other agencies
- MOUs, treaties or agreements with other agencies
- Relevant legislation in force (and identify any gaps)
- Penalties available (are they sufficient?)
- Levels of knowledge (CITES, species identification/ investigative procedures, case files, legislation, levels of illegality)
- Levels of training received (and any planned for the future)
- Availability of tools (ID materials/forensic)
- Information gathering mechanisms
- Information recording systems
- Information exchange mechanisms (nationally and internationally)
- Analysis of data
- Constraints

7. It is also very useful to have a good understanding of the levels of knowledge and capacity of prosecutors and the judiciary. If deterrents to illegal activity are to be increased, this sector must be better informed of the seriousness of wildlife crimes, therefore carrying out a needs assessment and providing information to judges, prosecutors and advocates is of vital importance.

### ***Results***

8. The results of the needs assessment will inform the structure of the capacity building

program and highlight new ways to improve the ability of agencies to combat illegal wildlife trade and carry out wildlife conservation work. These may include the establishment of a focal point within each agency or setting up a national multi-agency task forces. Such effort would encourage cooperation between agencies and can play a vital oversight role.

9. Multiple agency training is also recommended – where possible different agencies should be trained together, as this greatly enhances inter-agency co-operation. It is important to provide feedback to the agencies which participated in the needs assessment, which can be in the form of a capacity building action plan, including monitoring and evaluation components.

10. It is also useful to share between all the participating agencies a summary of what each agency's remit is, its roles and responsibilities, and useful contact points within each agency.

## **B. Wildlife Trade Enforcement Training: Development of a Generic Program Outline**

11. This generic Wildlife Law Enforcement Training Program is in a modular format and encompasses all the key elements required to deliver effective compliance with wildlife conservation legislation related to wildlife trade. The Program is intended for use as a template which can be tailored for use in individual countries or regions.

12. Development of a generic outline for a wildlife trade law enforcement program faces some inherent challenges. In particular:

- The drivers for wildlife use vary enormously from country to country (and within countries) and between different commodity groups. In some cases local consumption is a major factor, while in others, urban markets play a key role and, in others, the trade is largely driven by exports to other countries. The challenges of law enforcement can be very different in these different circumstances.
- The nature of wildlife trade policy and law varies enormously from country to country (and even within countries) – from total prohibition of consumptive use of major wildlife groups to management programs aimed to ensure sustainable trade and prescribed benefit flows.
- The nature of government structures differs greatly from country to country. The specific legally-mandated roles of nature protection, forest and fisheries management bodies, overseas trade departments, police, Customs and other institutions can be fundamentally different in different national settings.
- Enforcement resources, in terms of staff numbers, basic education, facilities and finance and the relative importance given to wildlife crime among other enforcement priorities again vary greatly from country to country.

13. Training schemes by their nature need to be tailored to specific circumstances and needs, available time and resources and a range of other guiding factors. This generic structure can therefore only provide some basic guidance on scope of subject matter, organization of themes and basic methodology.

## **Structure**

14. The program outline presented in the following section is organized under the following overall structure:

Module 1: Introduction to wildlife trade

Module 2: Understanding wildlife trade policy, law and regulation

Module 3: Understanding illegal wildlife trade and shaping the response

Module 4: Species identification and wildlife forensics

Module 5: Practical field skills for wildlife law enforcers

Module 6: Law enforcement action: case development and intervention

Module 7: Law enforcement action: managing legal proceedings

15. The specific outlines for the above modules are included in the project's OM.

## **C. Guidance Notes**

16. The following general comments may assist any future efforts to develop this generic model for use in specific regional, national or local circumstances:

- Any wildlife trade training package must be tailored to the local governance, legislative and institutional situation.
- A needs assessment process is an important first step in development of a tailored training package – involving key stakeholders from regulatory and enforcement agencies from relevant sectors (wildlife, fiscal, health etc.).
- Needs assessment will reveal institutional issues beyond training requirements, such as the need for standard operating procedures or action flow charts for wildlife trade work within individual agencies.
- Existing knowledge and skills levels will vary greatly. Based on needs assessment results the choice of subject areas from the generic outline provided and the grouping of subjects will need to be adjusted accordingly.
- A practical, hands-on approach to training is vital. Practical exercises within the training modules help develop real, sustained skills and knowledge transfer.
- Training package content may need to be tailored differently to different agencies involved – in few cases will staff from one agency be involved in all aspects of the enforcement disciplines covered by the outline provided in the present document.
- It is acknowledged that there are some overlaps in content between the modules outlined, with certain themes or topics arising repeatedly in different contexts. Some overlaps can assist the training process, but others may be avoided during tailoring of the modules to specific local circumstances.
- Training delivery may be achieved by the inclusion of one-off events, short-courses, or regular job reinforcement in general agency training curricula or other approaches suitable for local settings.

- Delivery of all seven modules presented in this outline could be implemented over a rough time span of 10 days. With practical exercises, field trips and assessments included, this might stretch to 15 days.
- Trainers may be drawn from within the target agencies, through government-to-government assistance, local and international NGOs and specialised training academies. In many cases, “train the trainers” approaches may be appropriate to ensure multiplication and sustainability of delivery. As a general rule, enforcers respond best to training by fellow enforcement professionals.
- Participation in training courses should be as far as possible focused on staff that will be responsible for delivery of enforcement action.
- Participating agencies should make efforts to ensure transfer of skills during staff succession.
- Training materials should be provided in formats that allow use by participants as on-going reference sources to course materials, further reading and key contacts.
- Monitoring and evaluation of training results and impacts should be ensured.
- Consideration should be given to gain accreditation for wildlife trade enforcement training under national qualification schemes.

## Annex 9: Economic Analysis

### **BHUTAN: Second Phase of the Adaptable Program Loan (APL) on Strengthening Regional Cooperation for Wildlife Protection in Asia**

#### **Background**

1. Quantification of the economic benefits of wildlife conservation is a challenge. Despite that, there is strong evidence that conserving natural ecosystems and the species that sustain them makes economic sense. Wildlife conservation brings a wide range of benefits, from indirect and intangible benefits, such as existence and bequest values to direct tangible economic values, most importantly income derived from and through ecotourism. Because wildlife conservation requires management of wider ecosystems as habitats, “secondary” effects result from conservation investments. They include, most notably, watershed services, and soil conservation, climate change mitigation and adaptation and cultural heritage.
2. The project proposes to address the mitigation of a regional public bad (illegal wildlife trade across borders) with the supply of these “goods” being found throughout South Asia. Because the “supply” is located physically in border straddling areas (India/Nepal, India/Bhutan, India/Bangladesh), adopting and pursuing a regional approach seems to be the most sensible solution to combating illegal wildlife trade and promoting habitat management/conservation. Creating regional enforcement standards, developing best practice applications and sharing successful schemes and knowledge/research across the “supply” region is the only viable way to substantially and comprehensively decrease the in illegal trade.
3. The direct use values of biodiversity arise from both commercial and non-commercial activities. While commercial uses – most importantly, timber – are important to domestic and international markets, non-commercial direct uses are limited, for the most part, to populations living adjacent to forest resources. Those uses – such as, collection of fuel wood, fruits and edible and medicinal plants, legal hunting and fishing – are important for meeting the subsistence needs of rural households – particularly the poorer groups.<sup>49</sup>
4. Despite the benefits of conservation, there are limits to national level approaches:
  - Cross-border spill-overs (positive spatial externalities) of conservation efforts, especially with regard to poaching and illegal wildlife trade
  - Fragmentation of ecosystems and wildlife habitat conservation
  - Inefficiencies in resource employment for conservation efforts, i.e. investments per area under conservation or investments per species saved
  - Insufficient habitat under conservation, especially for larger (migratory) species that need large areas for successful reproduction and survival

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<sup>49</sup> A. Ekbom and J. Bojö, 1999, “Poverty and Environment: Evidence of Links and Integration in the Country Assistance Strategy Process,” *Africa Region Discussion Paper 4*, World Bank, Washington, D.C.

5. Because of the above, the logical next step would be for scaled-up efforts at the regional level to enhance the efficiency and effectiveness of conservation through enhanced cooperation. Furthermore, ecosystems do not recognize political boundaries. The rise of potentially devastating global problems such as climate change, water shortages and biodiversity loss places an imperative emphasis on trans-boundary cooperation in landscape and ecosystem. Trans-boundary cooperation can act as a catalyst for new approaches to governance in border areas by addressing power imbalances between national and sub-national governments and local stakeholders. It can also foster peaceful cooperation in combating global and regional problems such as climate change, land degradation and water management.

6. The objective of this annex is to calculate the benefit-cost ratios of implementing the proposed project. The baseline against which the expected project benefits are compared is the situation where wildlife management remains a national effort without regional cooperation. Because South Asia is a region where economic integration has been especially difficult and most quantitative measures (e.g. exports, imports, financial flows) is lower than in other regions, the presumed baseline is reasonable.

7. With the predominance of global environmental challenges, the literature on the benefits of cooperation has emerged. For example, Sadoff and Grey identify benefits associated with improved water resource management.<sup>50</sup> They conclude that identifying and understanding the range of often inter-related benefits derived from the cooperative management and development of international rivers is central both to better management of the world's rivers and to relations among the nations sharing those rivers.

8. Regional initiatives that address illegal logging have multiplied. Some are centered on actions by importing, industrialized countries. For example, the G-8 countries have adopted principles for tackling illegal activities in the forest sector. There is strong evidence to suggest that increased efforts by both producer and consumer countries have proven to be significant in reducing illegal logging over the years. Awareness-raising by NGOs has been an important factor in driving improvements in enforcement in Indonesia while independent monitoring and private-sector initiatives driven by importers have been key for reducing illegal logging in Cameroon. Also, improved regulations and enforcement have been important in Brazil.

9. The above examples point to the wide range of benefits from cooperation.<sup>51</sup> Yet the difficulty of *assigning concrete, quantitative economic values to the generation of those benefits* is still intractable. First, the overall benefit of regional cooperation has to be disaggregated into clearly distinguishable benefits to avoid double counting. Second, most disaggregated benefits are already generated at the national level and therefore would be enhanced through regional cooperation. The economic benefits of the project entail incremental enhancements. However, establishing a clear cause-effect linkage between regional cooperation and the incremental benefits is difficult, if not impossible in practice, especially at the disaggregated level. Finally,

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<sup>50</sup> C. Sadoff and D. Grey, 2002, "Beyond the River: The Benefits of Cooperation on International Rivers", *Water Policy*, Vol 4: 389–403.

<sup>51</sup> A note, "Summary of Literature on Transnational Cooperation" can be found on pages 102-105 in Report No. 59962-SAS, World Bank, Washington, DC.



the lack of data compounds the difficulty of economic valuation.

10. A different approach is taken to evaluate the economic viability of the proposed project. As evident in the mentioned examples of regional cooperation, the approach focuses on identifying a benefit out of the range of possible benefits. A quantitative value is then assigned to the identified benefit. With the approach adopted here, the calculations of the identified benefit represent a lower bound economic value because all other benefits are excluded from the quantitative exercise. Nevertheless, the derived value provides an economic basis for evaluating the project.

### **The Economics of Regional Cooperation**<sup>52</sup>

11. The analysis of the economic benefits of trans-boundary wildlife management has focused largely on trans-boundary park management for which regional cooperation is predominantly driven by the objective of creating larger, contiguous management areas that allow the movement of larger populations of wildlife, especially (larger) migratory animals within their natural habitats.<sup>53 54</sup> In most cases, this type of cooperation is restricted to two neighboring countries and rarely involves more countries, such as the case with marine ecosystems. Also, the cooperation often focuses on the management of physical habitats rather than on strengthening the regulatory and governance framework of regional wildlife management which is the focus of the proposed project. An interesting example of regional cooperation that has been confirmed through a multilateral agreement is the Alpine Convention which focuses predominantly on improving environmental management.<sup>55</sup>

12. To date, a conceptual framework for the identification and economic valuation of the benefits of regional cooperation with the objective of eradicating poaching and illegal trade in wildlife is not available in the conservation literature. The most closely related literature is that of international efforts targeted at crime prevention. The structure and volume of illegal wildlife trade is similar to other areas of organized crime. Other areas of international crime include, but are not limited to, international terrorism, narcotics and drug trade, human trafficking, money laundering, illegal arms and hazardous waste trade and trade in counterfeit goods and currency.<sup>56</sup>

13. Illegal wildlife trade is often linked to organized crime and involves many of the same culprits and smuggling routes as trafficking in arms, drugs, and persons.<sup>57</sup> International wildlife

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<sup>52</sup> A note, "Economic Benefits of Regional Cooperation" can be found on pages 105-106 in Report No. 59962-SAS, World Bank, Washington, DC.

<sup>53</sup> Often as National Parks, for example Serengeti and Masai Mara (Tanzania – Kenya), Krueger and Limpopo NP (South Africa – Mozambique), and Lanjak Entimau Wildlife Sanctuary, Batang Ai NP, and Betung Kerihun NP (Malaysia – Indonesia).

<sup>54</sup> W. De Jong, 2008, "Transborder Environment and Natural Resource Management", *CIAS Discussion Paper 4*, Center for Integrated Area Studies (CIAS), Kyoto University, Japan.

<sup>55</sup> The Alpine Convention is an agreement between various countries for the protection and sustainable development of the Alpine Region. It was signed on November 7th, 1991 in Salzburg (Austria) by Austria, France, Germany, Italy, Liechtenstein, Switzerland and the EU. Slovenia signed the Convention on March 29th, 1993. Monaco became a party on the basis of a separate additional protocol. The Convention came into force on March 6th, 1995.

<sup>56</sup> Other sectors where enhanced regional cooperation have been documented include the fight against HIV/AIDS and the prevention and prosecution of genocide.

<sup>57</sup> <http://www.state.gov/g/oes/rls/fs/2009/120034.htm>

trade relies on organized criminal syndicates. Quite often, the same networks used to traffic people, drugs, weapons, and stolen goods are used to move endangered animals (alive or dead) or illegal timber. Wildlife trafficking is estimated to amount to US\$10-20 billion annually, the second-largest global black market after drugs.<sup>58</sup> Many wildlife smugglers deal in products that are worth more, per kilo than cocaine or heroin<sup>59</sup>. In response, INTERPOL established a Wildlife Crime Working Group.<sup>60</sup>

### Conceptual Framework for the Economic Valuation of Regional Cooperation

14. The seminal work by Sandler et al on the economics of INTERPOL and terrorism is also relevant to this case.<sup>61</sup> The analysis involves differentiating between defensive and protective countermeasures against transnational terrorism. Defensive actions harden potential targets at home – physical and human – and they dissuade terrorists by reducing the anticipated net gains from the attacks and raising the costs of attacks. However, defensive measures have a downside as they induce terrorists to find softer targets in other countries. The literature shows that defensive measures against transnational terrorism by one country result in a negative externality to another country as the attack is displaced abroad.<sup>62</sup>

15. In contrast, proactive or offensive measures directly attack the terrorists, their resource base (e.g., training camps, finances, or planners), or their supporters. Effective proactive measures that weaken a transnational terrorist group provide positive externalities to all at-risk countries. When a country chooses its proactive response to a transnational terrorist threat, the country compares the marginal benefits to the marginal costs, ignoring the marginal benefits that its response confers on other countries.<sup>63</sup> The downside of proactive measures is that, from a social viewpoint, the decision-making by a single country results in the inadequacy of the “supply” of proactive measures against the common transnational terrorist threat. In game theory, the Nash equilibrium is a situation where each country ignores the benefits that offensive measures confer on others and too little effort in combating terrorism is undertaken. As such, terrorists profit from the failure of nations to internalize the associated positive externality. In essence, proactive measures are a public good to all potential target countries. Those countries

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<sup>58</sup> <http://planetgreen.discovery.com/travel-outdoors/wildlife-trafficking-organized-crime-and-you.html>

<sup>59</sup> For example, Bear gallbladder and bile are used in traditional Chinese medicine to treat many ailments, including convulsions, fever and hemorrhoids. Bear gallbladders have a foreign black market value that ranges from C\$2,000 to \$10,000 per gallbladder or up to \$55 per gram. The exceptionally fine underfur of the Tibetan antelope, which is used to make luxury shawls, has pushed the Tibetan antelope to the brink of extinction. The wool is so fine that shawls can be pulled through a wedding ring. Within India, shawls are worth \$1,000-\$5,000, internationally the price can be as much as US\$20,000. Source: Commission for Environmental Cooperation, 2005, “Illegal Trade in Wildlife: A North American Perspective”. [http://www.cec.org/Storage/58/5059\\_Illegal-Trade-Wildlife\\_en.pdf](http://www.cec.org/Storage/58/5059_Illegal-Trade-Wildlife_en.pdf)

<sup>60</sup> <http://www.interpol.int/Public/EnvironmentalCrime/Wildlife/WorkingGroup/Default.asp>

<sup>61</sup> T. Sandler, D. Arce, W. Enders, 2009, “An Evaluation of INTERPOL’s Cooperative-based Counterterrorism Linkages”, <http://peio.vweb10-test.gwdg.de/papers2010/Sandler,%20Arce,%20Enders%2027.12.09.pdf>

<sup>62</sup> T. Sandler, K. Siqueira, 2006, “Global Terrorism: Deterrence Versus Pre-emption”, *Canadian Journal of Economics*, Vol. 39, pp. 1370–87; T. Sandler, H. Lapan, 1988, “The Calculus of Dissent: An Analysis of Terrorists’ Choice of Targets”, *Synthese* 76:245–61.; Sandler and Lapan (1988) quoted in Sandler et al. 2009.

<sup>63</sup> S. Bandyopadhyay, T. Sandler, 2009, “The Interplay Between Preemptive and Defensive Counterterrorism Measures: A Two-stage Game”, Research Division of Federal Reserve Bank of St. Louis, Working Paper Series Working Paper 2008-034C, <http://research.stlouisfed.org/wp/2008/2008-034.pdf>; Sandler and Siqueira (2006) quoted in Sandler et al. 2009.

where its citizens and their property are most in jeopardy are the ones most inclined to take offensive measures while the others free ride on their actions. This is analogous to the “prisoner’s dilemma.”

16. Defensive and proactive measures are also applied in combating illegal wildlife trade. When a country strengthens its defensive measure against illegal wildlife trade, agents and networks move their activities to other countries where defensive measures are relatively weaker. The other countries have an incentive to free-ride on their neighbor’s measures.

17. Unlike terrorism, successful enforcement that leads to the decline in the supply of illegal wildlife commodities raises the prices of such products and, in turn, increases the incentive to engage in illegal activities. Measures to tackle the demand for wildlife commodities, the root cause of the problem, are also imperative.

18. Sandler et al. conclude that, despite the fact that INTERPOL has reduced terrorism (with proactive measures but has not eliminated), proactive measures are still undersupplied, pointing to the significance of organizations like INTERPOL. Likewise, there is a role for regional cooperation – institutionalized or informal – to address trans-boundary illegal wildlife trade. The analysis shows that cooperative-based counterterrorism activities of INTERPOL have much to offer at surprisingly low cost when compared with standard proactive and defensive responses.<sup>64</sup> In contrast to the U.S. homeland security and proactive responses that cost billions of dollars, the cost of INTERPOL’s counterterrorism activities range in the millions of dollars.<sup>65</sup>

19. Computing INTERPOL’s counterterrorism benefits involves a counterfactual, that is, how many more transnational terrorist incidents and associated casualties would have taken place without INTERPOL’s coordinated measures. The challenge posed is overwhelming because the counterfactual is not observable. Instead, Sandler et al use INTERPOL’s counterterrorism arrests to estimate the reduction in the number of transnational terrorist events. However, focusing on arrests does not necessarily mean that those arrested will be convicted. Hence, the study points to a number of caveats but despite these, the authors believe that the payback from further use of INTERPOL assets is substantial. They conclude that the quantitative results are not surprising because network externalities lead to increasing returns to scale because of the benefits to all INTERPOL members.

20. A two-step procedure is used to measure the GDP savings from INTERPOL’s activities. Initially, the historical costs of terrorism using the actual number of observed incidents are estimated. Then, the study projects how much higher the GDP costs would have been had INTERPOL not helped thwart any incidents. The results are staggering – a dollar spent on

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<sup>64</sup> T. Sandler, D. Arce, and W. Enders, 2009, “*An Evaluation of INTERPOL’s Cooperative-based Counterterrorism Linkages*”, <http://peio.vweb10-test.gwdg.de/papers2010/Sandler,%20Arce,%20Enders%2027.12.09.pdf>

<sup>65</sup> With regard to pro-active counterterrorism measures it has to be emphasized that INTERPOL’s General Secretariat Headquarters and Regional Offices do not arrest criminals or terrorists; rather, they help member countries make arrests through the use of the organization’s linkages and resources. INTERPOL merely assists its member countries in their counterterrorism activities through its secure communication network, its databases, its investigative resources and specialized projects, its money laundering expertise, its dissemination of best practices, and secure communications among police worldwide. It connects all member countries to a secure global communication system that provides continual access to its databases.

INTERPOL counterterrorism brings, on average, a payback of US\$40-200 depending on the assumptions related to GDP savings. They conclude that the high benefit-cost ratios are a consequence of coordinated proactive counterterrorism measures that benefit all of INTERPOL's at-risk members. If the measures were taken unilaterally, the supply of counter-terrorism would be much less than the threat. However, cooperative countermeasures are able to capture the large externalities. The study contents that INTERPOL-assisted actions are less costly than military actions or defensive measures.

21. The authors provide convincing evidence that the high benefit-cost ratios are not overestimated. For example, the impact of avoided terrorist attacks is significantly underestimated. The approach also ignores the fact that a terrorist's arrest may yield multi-year paybacks. As defensive measures by rich countries shift (diffuse) the risks of transnational terrorism to more countries, the benefit-cost ratios associated with a coordinated proactive approach will increase as the risk is reduced to everyone. Simply put, INTERPOL presents large paybacks on small expenditures as it addresses the shortfall of collective proactive measures.

22. Because of the lack of data, it may not be possible to apply the same level of sophistication to the assessment of regional cooperation in fighting illegal wildlife trade. However, the conceptual framework presented above provides a basis for making inferences on the economic benefits of regional cooperation supported by the proposed project. Compared to the INTERPOL analysis, the costs can be derived directly from the costs of the proposed project.

### **Economic Values of Combating Illegal Wildlife Trade**

23. The same challenge exists with measuring the economic benefits of regional cooperation in reducing illegal wildlife trade. This challenge is further aggravated by the fact that South Asia does not have data on arrests. Extrapolation from data of other regions where regional cooperation is already in place is a reasonable option.<sup>66</sup>

24. The most comprehensive source of economic data on regional cooperation against illegal wildlife trade is the ASEAN Wildlife Enforcement Network (ASEAN-WEN). Like South Asia, the ASEAN region is a global hotspot for the poaching, trafficking, and consumption of protected wildlife. The annual value of the illegal wildlife trade in the ASEAN region is estimated at US\$10-20 billion. The region's high biodiversity and accessible transport links make it a target for illegal trade in protected species. The numbers imply the huge economic benefits to be gained by strengthening cooperation on wildlife management in South Asia.

25. Illegal wildlife trade has led to the destruction on a massive scale, threatening irrevocable damage to Southeast Asia's ecosystems. Illegal wildlife traffickers operate both within and between countries, through well-organized, cross-border networks. To effectively combat the

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<sup>66</sup> Another assumption made by Sandler et al. (2009) is that they do not presume a decrease of one incident in perpetuity, because terrorist organizations will recruit new operatives. Capturing one or more terrorist cell members will surely disrupt a planned incident until new terrorists can be trained or recruited for the mission. Our presumption is that arrests under various scenarios result in less incidents that year, because it takes time for terrorists to put the mission back on track. Whether this applies also in perpetuity for illegal wildlife is not clear, but it should be equally applicable in the short- to medium term.

crisis, law enforcement agencies must match tactics with the offenders. Police, customs and environmental management agencies need to form national, regional and international networks dedicated to investigating and eliminating large-scale illegal wildlife crime. Until recently, such collaborative networks between wildlife law enforcement agencies were unknown in Southeast Asia. The region's governments are now taking bold action to create vital cooperative links.

**Table 9.1: Statistics from ASEAN-WEN Law Enforcement Activities**

	2008	2009	January – March 2010
Number of law enforcement actions	67	141	19
Recovered animals			
Live animals	31,590	26,261	5,659
Dead animals, animal parts and derivatives	31,684	9,932	61,500
Tons of wildlife	53	268	2.7
Minimum estimate black market value (US\$ million)	4.3	40	4.5
Number of arrests	227	156	17
Number of convictions	N / A	45	N / A

Source: ASEAN-WEN Action Updates ([www.asean-wen.org](http://www.asean-wen.org))

26. The set-up of ASEAN-WEN is proposed for South Asia.<sup>67</sup> Therefore, it is reasonable to assume that similar impacts can be expected for the South Asia region as those presented in Table 9.1. The benefit-cost calculations for South Asia are based on the following assumptions. South Asia accounts for 13-15% of the world's biodiversity and the total value of illegal wildlife trade is estimated at USD 20 billion (in 2007 UNEP estimated the annual revenue of the wildlife trade at USD5-8 million annually).<sup>68</sup> With a linear correlation between the existence of biodiversity and illegal trade in wildlife products, the value of the illegal wildlife trade in South Asia would range between about USD2.6 and USD3.0 billion.

27. The figures represent a lower bound, conservative estimate since South Asia is disproportionately affected by illegal wildlife trade, especially with regard to tiger and rhino products. According to WWF Nepal, rhino horns fetch a price of up to USD10,000/kg within the country while tiger bones can fetch up to USD70/kg.<sup>69</sup> The prices of these products are much higher in the international market.<sup>70</sup> Consuming tiger parts for medicinal purposes is not limited to Asia. A recent WWF investigation in England of Chinese chemists, craft shops and supermarkets in London, Birmingham, Manchester and Liverpool showed that half the shops sold products claiming to contain tiger bone. The rising demand for tiger parts and rapid increase in the price of tiger bone continues to be an irresistible incentive to poachers and those

<sup>67</sup> A South Asia Wildlife Enforcement Network was proposed at a regional meeting in Kathmandu in May 2010.

<sup>68</sup> [http://www.tinopal.org/WWF\\_OCt\\_29\\_final\\_ukbrbt\\_Revised.pdf](http://www.tinopal.org/WWF_OCt_29_final_ukbrbt_Revised.pdf)

<sup>69</sup> [http://www.wwfnepal.org/our\\_solutions/projects/index.cfm?uProjectID=NP0902](http://www.wwfnepal.org/our_solutions/projects/index.cfm?uProjectID=NP0902)

<sup>70</sup> Due to increased demand, tiger bone prices can be double or even 5 times higher in South Korea; Taiwan, China; and other countries; depending on the size of the bones. In Taiwan, China, a bowl of tiger penis soup (to boost virility) goes for US\$320 and a pair of eyes (to fight epilepsy and malaria) for USD170. Powdered tiger humerus bone (for treating ulcers, rheumatism and typhoid) brings up to US\$3,200/kg in Seoul. [http://www.wwfnepal.org/our\\_solutions/projects/index.cfm?uProjectID=NP0902](http://www.wwfnepal.org/our_solutions/projects/index.cfm?uProjectID=NP0902)

involved in the trade. In view of the commercial demand, the value of the illegal wildlife trade is likely much higher but the conservative estimates assure analytical robustness.

28. Because of the illegal nature of the wildlife trade, one important variable for calculating the benefits of the proposed project is not only unknown for the South Asia region, but is even difficult to extrapolate from other regions. That is, what would be the reduction in illegal trade in wildlife products as a result of the project interventions? Sensitivity analysis is applied using different assumptions on the rate of “elimination of illegal wildlife trade” to calculate the number of years where the benefit-cost ratio breaks even.

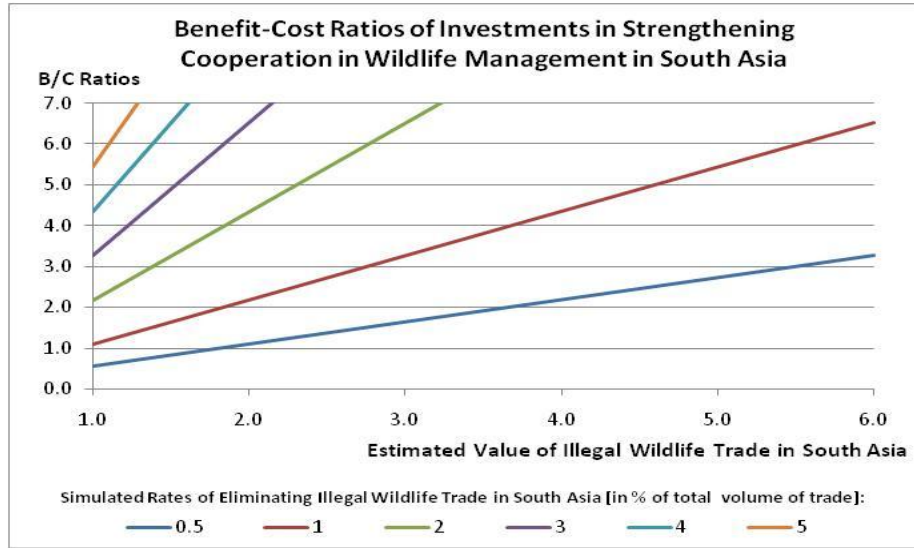
29. The calculation period was set at ten years with identical annual project investments spread over a period of five years. Ten years is a relatively short period but it follows the conservative approach used for the estimation. Sensitivity analysis was conducted with regard to (i) the discount rate applied for calculating the net present values of project costs and benefits; (ii) the estimated rate of elimination of illegal wildlife trade that will be achieved by the project investments; and (iii) the estimates of how much of the global illegal wildlife trade that can be assigned to South Asia. The parameters rely on varying degrees of uncertainty. The sensitivity analysis pinpoints the thresholds where project benefits exceed costs, i.e., where the benefit-cost ratios are higher than 1.

**Table 9.2 Benefit-Cost Ratios of Project Investments in Strengthening Regional Cooperation in Combating Illegal Wildlife Trade (IWT) for 10-Year Period**

Rate of Elimination of IWT (in %)	Value of illegal wildlife trade in South Asia (in US\$ billions)																	
	Scenario 1 Discount Rate 5%						Scenario 2 Discount Rate 10%						Scenario 3 Discount Rate 20%					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
<b>0.5</b>	0.5	1.1	1.6	2.2	2.7	3.3	0.5	1.0	1.5	1.9	2.4	2.9	0.4	0.8	1.2	1.6	2.0	2.4
<b>1</b>	1.1	2.2	3.3	4.4	5.4	6.5	1.0	1.9	2.9	3.9	4.8	5.8	0.8	1.6	2.4	3.2	4.0	4.9
<b>2</b>	2.2	4.4	6.5	8.7	10.9	13.1	1.9	3.9	5.8	7.8	9.7	11.6	1.6	3.2	4.9	6.5	8.1	9.7
<b>3</b>	3.3	6.5	9.8	13.1	16.3	19.6	2.6	5.2	7.8	10.4	13.0	15.6	1.8	3.5	5.3	7.1	8.9	10.6
<b>4</b>	4.4	8.7	13.1	17.4	21.8	26.1	3.9	7.8	11.6	15.5	19.4	23.3	3.2	6.5	9.7	13.0	16.2	19.4
<b>5</b>	5.4	10.9	16.3	21.8	27.2	32.7	4.8	9.7	14.5	19.4	24.2	29.1	4.0	8.1	12.1	16.2	20.2	24.3

30. The analysis involved a first set of 108 simulations to calculate the benefit-cost ratios of the project investments and the anticipated benefits. Table 9.2 shows that the benefit-cost ratios are below 1 in only a few cases. In all others, the benefits exceed the costs and in most cases the ratio is above 2 and higher; in extreme cases, the values are above 20. In addition to the tabular presentation, the results for scenario 1 (with a discount rate 5%) are presented in Figure 9.1. In interpreting the results, it needs to be noted that the calculations did not take into account possible increases in prices due to the reduced supply.

**Figure 9.1 Simulation results for Scenario 1**



31. A second set of 108 simulations was conducted to calculate the benefit-cost ratios of the project investments and the anticipated benefits for a 20-year period. The results are summarized in Table 9.3. The ratios are higher than those under the 10-year period especially for the calculations under scenarios 1 and 2.

**Table 9.3 Benefit-Cost Ratios of Project Investments in Strengthening Regional Cooperation in Combating Illegal Wildlife Trade (IWT) for 20-Year Period**

Rate of Elimination of IWT (in %)	Value of illegal wildlife trade in South Asia (in US\$ billions)																	
	Scenario 1 Discount Rate 5%						Scenario 2 Discount Rate 10%						Scenario 3 Discount Rate 20%					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
<b>0.5</b>	0.9	1.8	2.6	3.5	4.4	5.3	0.7	1.3	2.0	2.7	3.4	4.0	0.4	0.9	1.4	1.9	2.4	2.8
<b>1</b>	1.8	3.5	5.3	7.0	8.8	10.5	1.3	2.7	4.0	5.4	6.7	8.1	0.9	1.9	2.8	3.8	4.7	5.6
<b>2</b>	3.5	7.0	10.5	14.1	17.6	21.1	2.7	5.4	8.1	10.7	13.4	16.1	1.9	3.8	5.6	7.5	9.4	11.3
<b>3</b>	5.3	10.5	15.8	21.1	26.4	31.6	3.6	7.2	10.8	14.4	18.0	21.6	2.1	4.1	6.2	8.2	10.3	12.4
<b>4</b>	7.0	14.1	21.1	28.1	35.1	42.2	5.4	10.7	16.1	21.5	26.9	32.2	3.8	7.5	11.3	15.0	18.8	22.6
<b>5</b>	8.8	17.6	26.4	35.1	43.9	52.7	6.7	13.4	20.1	26.9	33.6	40.3	4.7	9.4	14.1	18.8	23.5	28.2

32. It needs to be emphasized that the results represent conservative, lower-bound estimates of the economic benefits derived from the proposed project. When all other benefits are included, the break-even point would be reached much earlier and the ratios would be even higher. To demonstrate that the simulations are robust and that that the project is more than likely to generate positive economic outcomes, the next section highlights the economic value of other possible benefits.

## **Economic Values of Biodiversity in South Asia**

33. As mentioned before, biodiversity is especially important to South Asia, especially as part of the tourism sector in the region. The World Travel and Tourism Council (WTTC) estimates the economic value of personal travel and tourism in South Asia at US\$18.7 billion in 2003, growing by 7.3% per annum in real terms. By 2013, this is projected to reach US\$52.2 billion but would still be only a small fraction of world travel and tourism, projected at US\$3,862 billion by 2013. Travel and tourism in South Asia contributed 4.8% to GDP in 2003 and is projected to rise to 5.3% in 2013. The industry provided employment to about 29 million people (5.2% of the total) in 2003 with projections of almost 36 million (5.4%) in 2013. In 2000, the combined total revenue from international tourists in the sub-region stood at US\$3.5 billion.<sup>71</sup>

34. The forests of Gir in India are the last refuge of the world's remaining 250- 300 Asiatic wild lions. Habitats across Bangladesh, Bhutan, India and Nepal are home to over 65% of the 3,000 or so remaining wild tigers and the Himalayas are the last redoubt of the critically endangered snow leopard, whose numbers are unknown. India is classified as a mega-diverse country and the Eastern Himalayas (encompassing numerous countries) a biodiversity hotspot.

35. A recent valuation study finds that, on average, each hectare of dense forest in India generates a net present value from ecotourism of about US\$1,350. With an estimated 390,000 hectares of dense forest remaining in India, studies suggest that this constitutes a total economic contribution of approximately US\$636 million. This figure underestimates the potential value of undisturbed natural habitats because it excludes other benefits that forests bring – such as timber, fodder, traditional medicines, bio-prospecting (e.g. new medicines), non-timber forest products and watershed benefits among others – as well as the non-use (preservation) values.

36. During 2002-2007, tourism receipts for India amounted to about US\$3.2 billion. Even if only a small fraction accounts for wildlife based tourism, the number is still significant. For the whole of South Asia, receipts from tourism are estimated at US\$10 billion in 2005.<sup>72</sup>

37. Tourism is also a priority under Bhutan's Ninth Plan 2003-2007. While the guiding policy will remain "high value, low impact" tourism, growth is now actively encouraged as a revenue earner and rural employer. Tourist arrivals amounted to 15,000 in 2007 with gross earnings exceeding US\$21 million and government tourism revenues reaching US\$8 million.

38. Taking into account the values of nature-based tourism in other regions of the world as presented in Table 9.3, it becomes clear that if the economic values of these benefits were to be integrated into the economic analysis of the proposed project, the benefits from implementing the project would increase considerably. This underscores the robustness of the calculations and supports the foregoing results that investments in strengthening regional cooperation in wildlife

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<sup>71</sup> Asian Development Bank, 2003, Technical Assistance for the South Asia Sub-regional Economic Cooperation Tourism Development Plan (TAR:STU 37007).

<sup>72</sup> UN ECOSOC, 2007, "Regional Study on the Role of Tourism in Socio-Economic Development", Consideration of legislative body and intergovernmental meeting reports and implementation of selected commission resolutions, including resolution 60/1 on the Shanghai Declaration: Managing globalization, Economic and Social Commission of for Asia and the Pacific; Sixty-third session May 17 - 23, 2007, Almaty, Kazakhstan.



management will generate economic benefits that far exceed the anticipated costs.

**Table 9.4. Economic Values of Wildlife Conservation**

<b>Animal</b>	<b>Value</b>	<b>Comment</b>	<b>Source</b>
Elephants	US\$25-30 million per annum = US\$1562 per elephant	Tourism value of elephants in Kenya. Travel cost method.	Brown Jr., G., and W. Henry. 1989. The Economic Value of Elephants. Discussion Paper 89-12. London Environmental Economics Centre.
Elephants	US\$23-27 million per year	Kenya. Estimated economic value of safaris yielded this viewing value for elephants. Travel cost method.	Brown, G. Jr (1993) The Viewing Value of Elephants. In <i>Economics and Ecology</i> (ed. E.B. Barbier), pp. 146-155. Chapman & Hall, Victoria, Canada.
Mountain Gorillas	US\$1,716,960 per year	Uganda. Net economic benefit of gorilla tourism in two parks per year.	International Gorilla Conservation Programme (IGCP) Final Draft Analysis of the Economic Significance of Gorilla Tourism in Uganda <a href="http://www.igcp.org/wp-content/themes/igcp/docs/pdf/MoyiniUganda.pdf">http://www.igcp.org/wp-content/themes/igcp/docs/pdf/MoyiniUganda.pdf</a>
Flamingos	US\$2.5-5 million per year	Annual recreational value of wildlife viewing in Lake Nakuru National Park in Kenya was found to be 7.5-15 million USD. The flamingos accounted for more than 1/3 of the value.	Navrud, S. & Mungatana, E.D. (1994) Environmental Valuation In Developing Countries: The Recreational Value of Wildlife Viewing. <i>Ecological Economics</i> , 11, 135-151.
Turtles	US\$2.68 million for 1999/2000 season	Expenditure in the Mon Repos, Queensland region	Tisdell, C.A. and Wilson, C. (2002a). Economic, Educational and Conservation Benefits of Sea Turtle Based Ecotourism – A Study Focused on Mon Repos. Wildlife Tourism Research Report Series: No. 20, CRC for Sustainable Tourism Pty Ltd, Gold Coast, Qld, Australia
Whales	US\$30 million for season	Expenditure in the Hervey bay region	Wilson, C. and Tisdell, C. (2003). Conservation and Economic Benefits of Wildlife-Based Marine Tourism: Sea Turtles and Whales as Case Studies. In <i>Human Dimensions of Wildlife</i> , 8: 49-58.