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## Acronyms and Abbreviations

<b>ADB</b>	Asian Development Bank
<b>BCI</b>	ADB's Biodiversity Corridors Initiative
<b>BKN</b>	Beung Kiat Ngong
<b>CC</b>	Climate Change
<b>CCBS</b>	Climate Change, Community, and Biodiversity Standards
<b>CEPA</b>	Community Education, Participation, and Awareness Focal Point
<b>CFi</b>	Community Fisheries



<b>NPA</b>	National Protected Area
<b>NTFPs</b>	Non-timber forest products
<b>PAFO</b>	Provincial Agriculture & Forestry Office
<b>PoNRE</b>	Provincial office of Natural Resources and Environment
<b>Ramsar Convention</b>	Ramsar Convention on Wetlands of International Significance
<b>RBC</b>	River Basin Committee
<b>RIS</b>	Ramsar Information Sheet
<b>RS</b>	Ramsar Secretariat
<b>RVESP</b>	Remote Village Education Support Project
<b>RSC</b>	Ramsar Steering Committee
<b>SEA</b>	Southeast Asia
<b>SIDA</b>	Swedish International Development Agency
<b>STRP</b>	Science and Technical Review Panel
<b>SUFORD</b>	Sustainable Forestry for Rural Development
<b>TPD</b>	Tree Plantation Day
<b>UNDP</b>	United Nations Development Program
<b>UNEP</b>	United Nations Environment Program
<b>UNESCO</b>	United Nations Education, Scientific and Cultural Organization
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>USD</b>	United States Dollars
<b>VCS</b>	Verified Carbon Standard
<b>WREA</b>	Water Resources and Environment Administration
<b>WWD</b>	World Wetland Day
<b>WWF</b>	



## Preamble/ Introduction

The Beung Kiat Ngong Wetlands complex in Champassak Province is one of two wetlands that were designated as Ramsar sites upon Lao PDR's accession to the Convention on Wetlands (Ramsar Convention) in 2010. Initial steps have already been taken to set up the institutional structure for site governance—a Ramsar committee for the site is in place, boundaries have been identified and a preliminary regulation has been approved (see profile and baseline for the Beung Kiat Ngong site, IUCN 2009 and IUCN 2011). However, much more work was required to implement conservation activities on the ground and to put into place a long-term conservation plan for the site.

By designating Beung Kiat Ngong site as a Ramsar site, the government of Lao PDR committed to ensure that the Ramsar Convention requirements are achieved by maintaining the ecological character of sites on the Ramsar List of Wetlands of International Importance, the wise use of all wetlands, the establishment of nature reserves at wetlands, whether or not they are included in the Ramsar List, and international cooperation where appropriate to the management of the site, in particular in the case of shared wetlands and water systems.

IUCN Lao PDR designed a profile to reflect the 2003 Ramsar Convention's "Guidelines for management planning for Ramsar sites and other wetlands" (Ramsar, 2003) and compiled information obtained during past surveys and projects within this site. This profile identified challenges and threats to adequate conservation/management of the Ramsar site and supported the basis for a reflection on a management plan.

This document follows up on the profile of Beung Kiat Ngong Wetland (IUCN 2011) and the baseline of the Beung Kiat Ngong Ramsar site (IUCN, 2011). These two documents identified threats and limitations to proper conservation of the Ramsar site and formed an initial basis for the analyzing the situation and formulating a management plan.

These preliminary findings have been discussed with local communities through cluster meetings to gather more information on threats and priorities for actions and needs. The Provincial Ramsar Committee met four times from 2011 (May and November) to 2012 (March and September) to discuss the first version of the management plan and to revise and comment on each new version.

IUCN Lao PDR office in Vientiane provided backstopping and support for drafting the plan, coordination of meetings and the Mekong Water Dialogues (MWD) field officer organized consultations with local stakeholders.

This management plan also benefited from comments from the national working group of the MWD project in Vientiane through a workshop on the subject and a field visit.



**Description and analysis of the  
Beung Kiat Ngong  
Ramsar site**

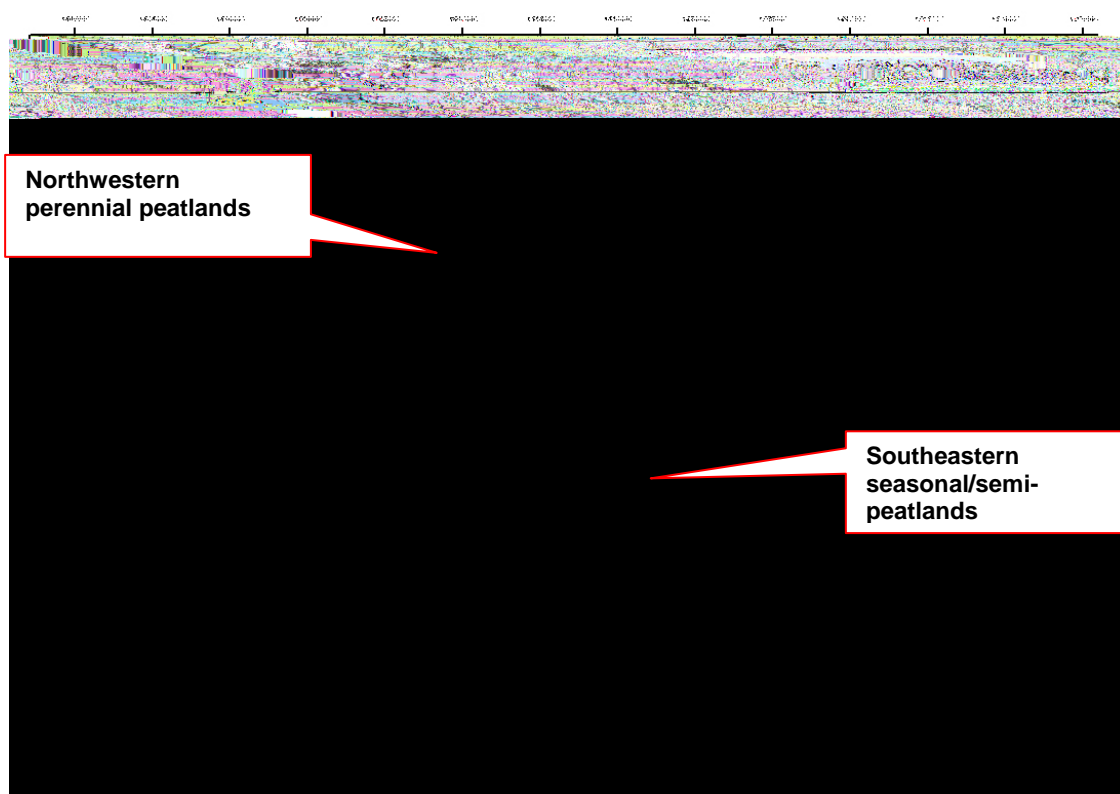
# I Description

## 1.1 Overview

The Beung Kiat Ngong Wetlands complex is made up of a number of important wetland types, including swamps, lakes, peatlands and marshes. The edge of the wetland is forested, and is surrounded by large trees, including species typically found in the south and east of Lao PDR. The forest is rich due to the quality of the soil and the abundance of water. Seasonal and perennial flooded grasses are also found here. The Beung Kiat Ngong Wetlands is also one of the few places in Lao PDR where peatland areas can be found.

The wetlands are shaped somewhat like a bat with outstretched wings: the perennial-peatland wetlands are found in one wing, the northwestern part of Beung Kiat Ngong, which includes high quality peatland accounting for about 400 hectares (ha); the seasonal semi-peatland wetlands with low quality peatland are found in the other wing, the southeastern part of the site, and cover about 1000 ha (see Map 1 below).

**Map 1: Beung Kiat Ngong Wetlands**



*Source: WREA, 2011*

Detailed studies on biodiversity have not yet been undertaken in the Beung Kiat Ngong Wetlands; although exact numbers of species are not known, the existing data show that it hosts an important array of aquatic and terrestrial biodiversity. During the wet season, the wetlands provide spawning grounds as well as a passage for a variety of fishes to move upstream along these rivers and streams. The wetlands also form an especially important habitat for fish during the low water dry season. Forty-three fish species have been reported in the wet season, while during the dry season only about 20 fish species remain in the area (IUCN, 2009a).

The Beung Kiat Ngong Wetlands provide small and medium nesting sites for water birds, as well as a source of food, such as plants, insects, fish and other small animals, for birds, wild and domestic animals, and humans. In 1996 a survey of the wetlands found 33 wetland-associated bird species (Claridge, 1996). In 2009, surveys conducted in six main villages around the wetlands showed a similar number of bird species including: Cattle egrets (*Bubulcus ibis*), Intermediate egret (*Mesophoyx intermedia*), Lesser tree duck (*Dendrocygna javanica*), Painted snipe (*Rostratula benghalensis*) and Chinese pond heron (*Ardeola bacchus*) (IUCN, 2009a). More detailed bird surveys would undoubtedly reveal a much larger number of wetland-associated bird species.

The wetlands also support a human population of around 11,500 people from eight core villages and another five surrounding villages. These villages are primarily reliant on subsistence agriculture, wild-capture fisheries, wild vegetables and non-timber forest products (NTFPs) for their livelihoods, food and income. Some income is also earned from tourism businesses, particularly in Ban Kiat Ngong. Paddy fields are found around the edge of the wetlands, especially in the seasonal wetlands in the east of the site. In addition, about 4,300 cattle and water buffalo and 27 elephants are living in the wetland area (IUCN, 2008b). The economic value of all agricultural, fishery and NTFP products coming from the Beung Kiat Ngong Wetlands is estimated to be about USD 850,000 per year (IUCN, 2009b).

This report provides an overview of existing data about the wetlands, including its ecology, biodiversity, socio-economic values, management and threats. The bulk of the information presented in this report was gathered from project reports from key organizations working in the wetlands and surrounding areas over the past decade or so, as well as from documents prepared for the site's nomination when Lao PDR joined the Ramsar Convention on Wetlands of International Importance in 2010.

## 1.2 Location

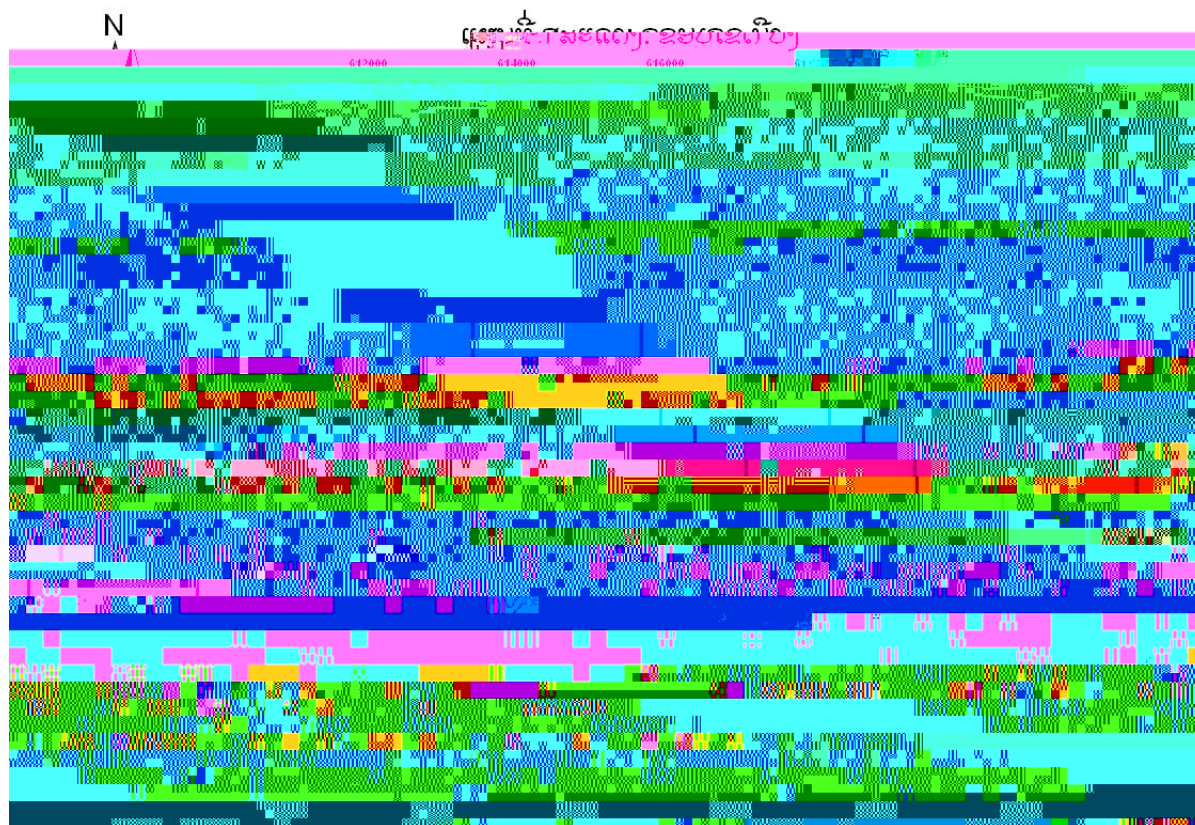
The Bung Kiat Ngong wetland cover 2,360 hectares and is located in Pathoumphone District, Champassak Province in southern Lao PDR, approximately 56 km south of the provincial capital, Pakse. The elevation of the site is 120 to 200 meters above sea level. The southern parts of the wetland, as well as most of the village of Ban Kiat Ngong, are located within the Xe Pian National Protected Area (NPA) (Duckworth, 2008). At the broadest regional scale, the Beung Kiat Ngong wetland is included the Indo-Burma Biodiversity Hotspot or the Central Indochina area (tropical lowland plain) (see Conservation International, 2006). Map 2 shows the wetlands' location between the two NPAs.





Most easterly point: 14°43'53" N, 106°08'42" E (Chong Houay)  
Most westerly point: 14°46'16" N, 106°02'16" E (Ban Kiat Ngong)

**Map 3: Beung Kiat Ngong wetlands and main villages**



*Source: IUCN LLS Project records*

### 1.3 Catchment area

The catchment area of the Beung Kiat Ngong Wetlands, including the streams that flow into the wetlands, is estimated to be at least 10,000 ha in size (Khamlibounthavi, 2008). There are two main water sources for the wetlands, one from the Xe Pian NPA (Xe Khampho Basin) and another from Dong Hua Sao NPA (Tamo Stream Basin). Thus the wetlands are linked to a number of rivers and streams, including the Xe Khampho, Tamo, Xe Pian and Xekong rivers and the Takuan and Ta Euang streams. During wet season, all these waterways are ecologically connected. The Xe Khampho is believed to support well over 150, and possibly up to 200-300 fish species. The main forest types in the catchment area include lowland dry evergreen forest, mixed deciduous forest, and shrubs.

### 1.4 Landscape and Ecology

The Beung Kiat Ngong wetlands is one of the most important and unique wetland areas in Lao PDR. Much of this wetland is peatland or peatmarsh and swamps. Both perennial and seasonal ponds are also found in the wetlands complex, including

landscapes composed of fresh water marshes, lakes, ponds, rice paddy fields, seasonally flooded grassland, shrubland and forest (Claridge, 1996). Found in the area are water birds, a variety of fish, vegetation, livestock grazing areas, fish ponds, settlements and traditional rice cultivation. According to the Ramsar Information Sheet (RIS, WREA 2011) for the wetlands, four types of wetlands have been identified within the overall Beung Kiat Ngong site:

- The Mekong River, with braided and main channels, deep pools, rapids and waterfalls;
- Rice fields (rain-fed & irrigated);
- Emergent and flooded shrubs, and riparian, seasonally flooded forest;
- Marshes with small pools (known as *nong* in Lao language), which are reduced significantly in area in the dry season, plus farm ponds.

The Beung Kiat Ngong wetlands is one of the few areas in Lao PDR where peatland areas can be found. The area also includes rich semi-evergreen forest areas within the broader wetland mosaic. More detail on the features of the wetlands area is provided below.

#### 1.4.1 Water and hydrology

The main part of the Beung Kiat Ngong wetland is not an open surface wetland. Many different islands with large trees and piles of rocks can be found in the wetlands. Above the water surface, there is also a thick layer of decayed grasses with new shooting grasses and emergent weeds as well as bushes growing on top of this layer. The thick layer of grasses is found mainly in the northwestern wing, where it floats over still water. Most parts of the wetlands are shallow, although some areas are as deep as 2-3 m in the dry season. Water permanence during the dry season is about 300-400 ha for the main part of the wetland. Apart from this area, there are some other scattered small marshes and swamps that retain water throughout the year. During the wet season water levels go up, peaking from August to early October, with peaks close to 2 m above the dry season water levels. This occurs throughout the area. The thick layer of floating grasses can be observed in the dry season, particularly in April and May, when the layer becomes harder. Where there is shallow water, the layer is likely a mixture of both grass and soil. However, in the deep water area there is still water underneath. It is possible for people to walk on top of the soggy thick layers during the dry season.

Water quality in the wetlands is still quite good as it has not been heavily disturbed, and because there is a relatively low level of agricultural chemical use around the wetlands (although there are concerns that this is increasing). Rice paddy fields are found around the edge of the wetlands and mainly in the southeastern part of the wetlands. Dry crop cultivation is also practiced but only on a small scale. Because



- Kiatngong as the biggest and best-known wetland in the BCI area (Duckworth, 2008).
- Interviews and surveys conducted for the IUCN Livelihoods and Landscapes Strategy (LLS) project in 2009 (IUCN, 2009a).

#### 1.4.4.1 Flora

There is a paucity of information available regarding the flora of the Beung Kiat Ngong Wetlands. A general description is provided by Claridge (1996) and some work was done during the “Rapid and Participatory Biodiversity Assessments” (BIORAP) survey in the main part of Xe Pian National Protected Area (Mather et al, 1997). Recent work has been carried out on the economic value of the wetlands (Khamlibounthavi, 2008). However, these surveys did not focus on specific plant species. At present it is not known if any rare or endangered flora species are present in the area. More broadly, the wetlands are surrounded by valuable tree species such as Malva nut trees (*Mak chong*). Although harvests vary from year to year, Malva nuts often provide an important source of income for local people. Other NTFPs such as berberine and wild honey are also harvested from the area.

A study (Elkington *et al*, 2009) conducted in 2009 focused on surveying and identifying medicinal plants growing in the wetlands and surrounding forested areas. The survey focused on five villages near the wetlands including Kiat Ngong, Topsok, Phapho, Kelae, and Phalai. More than 320 plants representing more than 240 species of plants, belonging to 180 genera in 80 families of vascular plants, are used by traditional healers in medical therapy in the area, including *Tinospora crispa*, *Desmodium lanceolatum*, *Orthosiphon stamineas*, and *Vitex trifolia*, among others. At least 15 of these species have not been previously reported for medicinal properties, suggesting that their uses may be unique to Lao PDR. More than 300 unidentified plants were also noted by the study, and specimens of 116 plants were collected and have been deposited at the Traditional Medicine Research Center herbarium in Vientiane and the John G. Searle Herbarium at the Field Museum of Natural History in Chicago, USA.

#### 1.4.4.2 Fauna

The Beung Kiat Ngong Wetlands have not been adequately studied and surveyed, and therefore, there is a lack of detailed information on the fauna of the area. Historically, the wetlands have supported key species such as Siamese crocodiles (*Crocodylus siamensis*), Sarus cranes (*Grus antigone*), Great adjutants (*Liptoptilos dubius*) and Oriental darters (*Anhinga melanogaster*). These species were reported in the area 15 years ago (Claridge, 1996), but have not been confirmed recently, although there are still some occasional reports of Siamese crocodiles. Numerous bird species are found in the area including Cattle egrets (*Bubulcus ibis*

As part of Xe Pian National Protected Area, this wetland area is considered an important site for bird feeding and occasionally for nesting. The Beung Kiat Ngong Wetlands are suitable for small and medium nesting sites for water birds, and provide a source of food, such as plants, insects, fish and other small animals, for birds, wild and domestic animals, and humans.

However, there is evidence that the area has suffered a decline of bird species. A 2008 survey (Duckworth, 2008) of biodiversity in the corridor between Xe Pian and Dong Hua Sao NPAs, which includes Bueng Kiat Ngong, found that many non-forest species that should live in the survey area are now effectively absent, such as Sarus crane, Black kite, Grey heron, Spot-billed pelican and Greater adjutant. Further, a number of species are at “real risk of local extinction”, including: Green peafowl; Red-wattled lapwing; all species of vulture resident in Lao PDR; Vinous-breasted starling; White-vented myna; and, among forest and -edge species, Oriental pied and Wreathed hornbills, Alexandrine, Blossom-headed and Red-breasted parakeets, and Green Imperial pigeon. As Duckworth notes, these trends are typical of Lao PDR, and although it has lost much, the survey area remains very important for wetlands and grasslands birds.

Highlights of the 2008 survey included: a foraging Brahminy kite; Cotton pygmy-goose; Pheasant-tailed jacana and Grey-headed lapwing; the first White-browed crane sighting for South Lao PDR; thousands of mid-winter egrets; and a fly-over Spot-billed pelican. Within Beung Kiat Ngong specifically, nearly all wetland bird species recorded during the survey were found here. These included: several large roosts of harriers, mixed Yellow wagtails and Red-throated pipits (by far the largest known in Lao PDR); Yellow-breasted bunting (a globally near-threatened species); Streaked weavers (the only Lao record); many Purple herons (with the only breeding site reported); many egrets; Storkbilled kingfisher; and several species of rallid, including the first record of White-browed crane for South Lao PDR. However, as the composition and numbers of water birds varies significantly with season, further surveys are required to fully assess the status of bird species at the wetlands. A full list of results of the 2008 survey is provided in Annex 1.

### *Mammals*

Some mammals are present in the area such as Barking deer (*Muntiacus muntjak*), rabbits, Civet (*Viverra sp*), as well as reptiles, amphibians, and fishes (WREA, 2011). Gaur (*Bos gaurus*)



Tables 2 and 3 below show key fish species in the wetlands according to season.

**Table 2: Key fish species in the dry season**

**Table 3: Key fish species that migrate into the wetlands  
for spawning in wet season**

Scientific name	Common name/family	Local name
<i>Channa sp.</i>	Channidae	Pa kuane
<i>Channa sp.</i>	Channidae	Pa do
<i>Cirrhinus sp.</i>	Cyprinidae	Pa keng
<i>Cirrhinus sp.</i>	Cyprinidae	Pa kha yang
<i>Danio sp.</i>	Cyprinidae	Pa vienphai
<i>Notopterus notopterus</i>	Asian Knifefish	Pa tong
<i>Tetraodon sp.</i>	Tetraodontidae	Pa pao

Source: WREA, 2011

## 1.5 Economic, social and cultural values

### 1.5.1 Population

Pathoumphone District, where the wetlands are located, is one of 72 districts in Lao PDR identified as poor (also known as “poverty districts”) (*Socio-Economic Atlas of Lao PDR*). Data gathered in the 11 villages of the wetlands by the IUCN LLS project (of which four are considered core/outer wetlands villages) between 2008 and 2010 shows that in 2010, of 1128 households, 208 households are considered “poor” or “extremely poor”, representing a poverty rate of 18%. Slightly more households are considered “wealthy”, with 234 (20%) out of 1128. Among the four that are core or outer villages on the wetlands, of 39 out of 375 households are considered poor or extremely poor, a relatively low poverty rate of 10.4% (please see Table 5 below for more detail).

According to a report from the BCI project (ADB, 2009), the average household size in this area is around six people, which is higher than the district average. The population density in the BCI villages was estimated to be around 40 people/square



**Table 4. Annual economic value derived from Kiat Ngong Wetlands in 2009**

<b>Item</b>	<b>Harvest/ year (tons)</b>	<b>US\$</b>	<b>Percentage of total value</b>
Fish	227.4	519,355	61
Eels	37.00	82,235	9.7
Frogs	137.1	112,600	13
Snails	13.00	3,058	0.3
Vegetables	5.70	1,411	0.17
Rice	724.4	131,011	15.4
<b>Total</b>	<b>1,144.6</b>	<b>849,682</b>	<b>100</b>

*Source: IUCN, 2009b*

This figure of US\$849,682 can be supplemented with the economic benefits derived from livestock grazing and tourism. According to IUCN (2008a), the wetlands support grazing for 4350 elephants, buffalo and cattle, amounting to 5430 “grazing units” which consume almost 40,000 tons of wetland vegetation. At an estimated cost of 3 baht per 15 kilograms, the equivalent in purchased feed for animals would amount to about US\$263,000 per year (please see section on agriculture below for more detail). Tourism earnings from elephant trekking alone has been placed at more than US\$20,000 per year, bringing the combined economic value of the wetlands closer to US\$1,132,000 annually.

According to ADB (2009), people in some villages in the corridor area, such as Ban Houayko, where there is less land available, have begun working as wage labor to earn extra income. Some seek employment in coffee plantations in Pak Xong or other nearby locations; some also migrate to Thailand in search of better opportunities. Better-off households also engage in small business, such as running shops, transportation, and handicrafts.

**Table 5: Socio-economic census data for 11 LLS villages, 2008-2010**

*Source: IUCN Lao PDR LLS project records*

### *Agriculture*

As noted above, local people rely primarily on subsistence agriculture, NTFPs and fishing for their income and food supply in and around the Beung Kiat Ngong Wetlands. Local villagers grow paddy rice in the wet season, and water from the wetlands also supports gardens. Villagers also harvest fish and vegetables through the year from the wetlands and use boats both for fishing and farming. As shown in Table 8 below, IUCN field measurements in the wetlands area in 2009 found that there were 322 ha of rice paddies and about 4.5 ha of gardens. The rice grown in and around the wetlands is worth about \$130,000 each year (IUCN, 2009b). There are special varieties of rice in the area that are adapted to local conditions, such as floating rice.

The wetland is also grazing land for more than 4000 head of livestock, including cattle, buffalo and elephants, which feed on the wetland grasses. Provincial government officers from Xe Pian NPA produced a list of livestock numbers for each of 19 villages which might be expected to be grazing their animals in or around the

<b>Total outer villages</b>	<b>5</b>	<b>862</b>	<b>1399</b>	<b>2742</b>	<b>4</b>	<b>425</b>	<b>496</b>	<b>1174</b>	<b>43</b>	<b>22</b>
<b>Total all villages</b>	<b>28</b>	<b>2310</b>	<b>3754</b>	<b>7499</b>	<b>27</b>	<b>1674</b>	<b>2649</b>	<b>5430</b>	<b>72</b>	

**Table 7: Important NTFPs contributing to family cash income, ranked according to importance by villagers in 11 villages of the BCI site.**

*Source: IUCN 2009c*

*Other uses*

The wetlands also have economic value in terms of other natural resources, such as peat and timber. Between 2006 and 2009, a Vietnamese company was involved in

Champassak Province. This is a significant increase from 63,963 visitors to the province in 2004 (LNTA, 2010). Transport and access to the province has improved, with daily flights to Pakse, and a road bridge crossing the Mekong to Thailand along with an improved road to the in.nd alo

domestic elephants is uncommon and the elephant population is not being renewed. Conversations with local mahouts indicate that Pathoumphone District was home to approximately 90 domesticated elephants ten years ago; only 14 or 15 remain today (Maurer, 2009; Elefant Asia, 2010). Maurer (2009) comments that, without intervention, the domesticated elephant population of Champassak Province will be close to zero within 20 years.

Beung Kiat Ngong Wetlands and its surrounds also host cultural sites, including Phou Asa and carved figures in the river bed rock at Ban Kasee (Xe Pian NPA website). Phou Asa, a hill adjoining the wetlands, is marked by many piles of flat stones where a 'temple' is located. Each pile is about 3 m high and stands like a pillar. This temple was built under the direction of the Buddhist monk, Phra, at the beginning of the 19<sup>th</sup> century. He gathered up an army of ethnic minorities to fight against the oppressive slave trade. They sacked and burnt Champassak, forcing the then King of Champassak, Chao Manoi, to flee. Later, King Anouvongsa's son, Chao Nyo, eventually captured him in Attapeu (Baird 2007, cited in WREA 2011).

## 1.6 Summary of Ecosystem services

- IUCN field measurements in the wetlands area in 2009 found that there were 322 ha of rice paddies and about 4.5 ha of gardens. The rice grown in and around the wetlands is worth about \$130,000 each year (IUCN, 2009b). There are special varieties of rice in the area that are adapted to local conditions, such as floating rice.
- Local villagers from the main villages around the wetlands annually harvest about 227 tons of fish, 187 tons of other aquatic resources, and 5-6 tons of vegetables; fish and eels account for a combined 70.7% of the total economic value derived from the wetlands (IUCN, 2009a).
- IUCN Lao PDR's work through the LLS project found that around 89% of families in the area are engaged in harvesting NTFPs. IUCN's efforts to promote the sustainable harvesting of Malva nuts has resulted in better management of the Malva nut stands and increases in local income from the NTFP (IUCN, 2009 c&d).
- Between 2006 and 2009, a Vietnamese company was involved in peat extraction in the Beung Kiat Ngong wetlands. According to the Ban Kiat Ngong council, the company worked 2-3 months per year, extracting about 650 cubic meters of peat each day worked. This left more than 20 holes of about 10 x 10 x 5 m in size in the northern part of the wetlands (IUCN, 2008a). After complaints by local villagers and intervention by the



<p><b>Supporting</b> (bio-habitat, spawning, sediment retention and nutrient cycling)</p>	<ul style="list-style-type: none"> <li>- During wet season, the wetlands provide passage for a variety of fishes to move upstream along these rivers and streams, as well as providing spawning grounds. The wetlands also form an especially important habitat for fish during the low water dry season.</li> <li>- Sediment trapping (due to the slow water flow).</li> <li>- Habitat for key conservation species (Fishing Cat, sambar, and Malayan snail-eating turtle) and economic species (Malva Nut)</li> <li>- Bird feeding grounds and sometimes as a nesting site</li> </ul>
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## 1.7 Governance and Management of Ramsar convention and Beung Kiat Ngong Ramsar site

### 1.7.1 Ministries, Agencies, and Other Governmental Institutions Managing Ramsar Sites in Lao PDR

#### 1.7.1.1 Central level Governmental Institutions

Lao PDR's government structures for natural resource management are relatively complicated, as there are overlapping roles and responsibilities between key agencies. However, this system has been recently reformed, with the creation of MoNRE.

Until recently, the lead agency for the management of water resources in Lao PDR has been WREA. Established in 2007 under the Prime Minister's Office, but with the status of a ministry, WREA's mandate was to ensure environmental protection and sustainable development. It was responsible for management of water, a number of MEAs (including Ramsar), climate change, environmental monitoring and conducting, approving and monitoring EIAs and issuing environmental certificates and RBCs. WREA also hosted the LNMC. WREA has suffered significant capacity constraints, although this situation has been changing, with the creation of new divisions and attempts to increase staffing. However, the lack of capacity is still pronounced at the provincial and district levels, where in some cases, there is only several environmental staff.

In 2011, the creation of four new ministries was announced, including MoNRE. MoNRE includes the departments of WREA combined with the conservation departments of MAF, the National Land Management Authority (NLMA) and several other resource related departments, such as geology. MoNRE aims to centralize the management of natural resources in order to protect the environment and ensure sustainable development (Vientiane Times, 1 August 2011).

With several departments moving to MoNRE, the role of MAP Tc .0cFe T\* binedttainas(ief Tw [(1.i(iaT

certificates, an important regulatory tool which allows companies to invest in the Lao agricultural sector. MAF's continued role in managing agriculture and agribusiness (including irrigation), as well as potentially fisheries, means it will still be influential in wetlands management (especially as so many wetlands are located outside of protected areas). MAF also conserves responsibility on wetlands management outside the Ramsar status whereas MoNRE leads the implementation of the Ramsar convention in Lao PDR including management of Ramsar sites in the country.

As mentioned above, the NLMA is another agency shifted into MoNRE. The NLMA was established in 2006, and like WREA, it had the same status as a ministry although directly attached to the Prime Minister's Office. The Authority was mandated to draft laws and regulations on land management, and in cooperation with other relevant agencies to investigate, register and develop land use management plans and strategies. The NLMA also cooperated with other agencies to consider and issue land-use certificates, and was obligated to monitor, control and evaluate land-use within the country. The NLMA has a network of offices at the provincial and district level but due to its recent establishment it still lacks human and technical resources.

#### 1.7.1.2 Multi-sector cooperation

Multi-sector cooperation between different government agencies and other stakeholders is a growing trend in Lao PDR. Often in the form of committees, multi-sector cooperation is increasingly used in the governance of natural resources, such as the country's newly established RBCs, as well as in other areas, such as Investment Approval Committees at the national and provincial level. A number of multi-sector committees are involved in wetlands policy and management. These are:

- *National Committee for Wetland Management and Ramsar Convention:* This Committee was formed after Lao PDR joined the Ramsar Convention in September 2010. According to the PM's "Decree on the Appointment of National Committee for Wetland Management of the Ramsar Convention in Lao PDR", from November 2010, its duties are to:
  - Provide guidance on the implementation of management in Beung Kiat Ngong and Xe Champhone, the designated Ramsar sites;
  - Provide guidance on preparation and proposal of new wetlands to UNESCO/Ramsar Secretariat as Ramsar sites;
  - Provide guidance and comment on management plans;
  - Consider development of a technical organization and secretariat;
  - Provide guidance for coordination and cooperation with international actors/organizations;
  - Perform other duties and jurisdictions as assigned by the appropriate leading government office.

The Committee is high-level; it is chaired by the Vice-Prime Minister and President of the National Environment Committee), currently H.E. Mr Asang Laolee. The membership is broad, including:

- x Vice Minister of MAF
- x Minister of PM office and the Head of WREA (now – MoNRE)
- x Vice Minister of MoIC

x

also play an important role in promoting and selecting investments for the province (for example, several provinces are currently preparing provincial investment strategies as part of a UNDP-UNEP supported project).

In terms of multi-sector committees, Champassak Province has set up a Provincial Ramsar Committee and Provincial Secretariat. Chaired by Vice-Governor, members of the Champassak Province Ramsar Committee include: the Provincial Tourism Office; Provincial Education Office; Provincial Land Management Office; Provincial Health Office; Provincial Water Resources Office and Provincial Natural Resources and Environment Office; Provincial Agriculture and Forestry Office; Provincial Transport and Communications Office; and the District Governor for the Ramsar site. The Champassak committee meets every six months, and can call ad-hoc meetings if necessary. It mainly addresses issues at Beung Kiat Ngong. The Provincial Secretariat is nominated by the Provincial Ramsar Committee. To date, provincial WREO has been filling this role and is scheduled to meet once every three months to discuss Ramsar relevant work. The Provincial Ramsar Committee focuses on site planning whereas the Secretariat is more focused on liaising with the Ramsar Field Management team (district level) and three village clusters (*khumban*). For example, when field work activities are planned in Beung Kiat Ngong, the work is in coordinated through provincial NREO.

At the site, a multi-sectoral District Ramsar Field Management Team has been established to carry out field activities. The Field Management Team has nominated a District Ramsar Secretariat (DAFO) to assist in implementation of Ramsar work.

Clearly, there is a thorough institutional structure and system of delegating Ramsar related work, starting at the national level and reaching the local level. However, at present, there are few resources available to carry out management and conservation activities on the ground. Once more resources reach the site and implementation of the site Management Plan begins, there will already be a solid structure in place to support these activities.

Laws and regulations for natural resource management promulgated at the national level are also often developed at the district level. For example, based on national law, districts prepare and implement regulations on fisheries and forests, setting out conservation zones and penalties for infringements, usually fines. On rare occasions, these regulations skip the district level and are formulated at the village level, such as those for community fisheries. LFA, and in some cases land use planning, are also carried out at the district level and below. Similarly, development planning occurs at the provincial and district level.

However, some actors and regimes for the management of natural resources, including wetlands, only occur at the village or community level. As structures and processes for on-the-ground management, these can be very influential.

- *Khumbans, Khet and councils*: Village clusters (*khet*) or “development clusters” (*khumban*) are groupings of villages, designed to promote development and local governance. The clusters meet regularly and can also have enforcement (militia) arms. Village councils, headed by a Village chief (*Naiban*), manage village affairs and are responsible for certain community resources, such as village protection or production forests. Village leaders also play an important role in managing small-scale irrigation, enforcing fishing rules and allocating land (even where no land-use planning or titling has been carried out).

## 1.7.2 Relevant Activities of Private Entities, Public Interest Groups, Professional Bodies, and the Academic/Research Sector

The table below outlines activities of all non-governmental entities whose activities impact the wetlands.

**Table 9: Non-governmental activities impacting the wetlands**

<b>Villages</b>	<b>13 wetland villages</b>	<ul style="list-style-type: none"><li>- The Regulation on the Wetlands was agreed upon and applies to 8 wetlands villages.</li><li>- An additional village is also engaged in work on Ramsar and wetlands management</li><li>- Relevant projects in the area, such as BCI &amp; LLS, have worked in 11 villages in Pathoumphone District</li><li>- Each village cluster has a representative on the District Wetlands Com2lrKtee; localCom2lrKte-5.79(s )JTJ</li></ul>
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<b>International organizations &amp; NGOs</b>	<b>Ramsar Convention</b>	<p>The Ramsar Convention on Wetlands of International Importance accepted Lao PDR as a party in September 2010, after many years of preparation</p> <p>Two sites were nominated by Lao PDR as wetlands of significance: Beung Kiat Ngong in Champassak Province and Xe Champhone in Savannakhet Province</p> <p>Joining the Convention signals commitment to work actively to support its “three pillars”: 1) ensuring the conservation and wise use of wetlands it has designated as Wetlands of International Importance, 2) including as far as possible the wise use of all wetlands in national environmental planning, and 3) consulting with other Parties about implementation of the Convention, especially in regard to transboundary wetlands, shared water systems, and shared species.</p>
	<b>ADB</b>	<p>The ADB is currently implementing Phase 2 of its BCI project which includes Beung Kiat Ngong; the BCI is paralleled by one of the GMS economic corridors, linking Thailand to Vietnam across Lao PDR.</p>
	<b>IUCN</b>	<p>IUCN has been working in the wetlands area for some years, including some tasks for BCI, followed by the LLS project, starting in 2008.</p> <p>IUCN also supported the GoL in preparations for joining the Ramsar Convention and has been named CEPA focal point for this Convention in Lao PDR.</p> <p>Ongoing work in the wetlands will be supported under IUCN’s Mekong Water Dialogues project (Phase 2) and a number of other IUCN projects.</p>
	<b>WWF</b>	<p>WWF has been implementing the ADB’s BCI project in the corridor that includes Beung Kiat Ngong</p> <p>Also supported work on community-based tourism in Xe Pian NPA and piloting Green Club environmental education activities in schools.</p> <p>Between April 2009 and June 2011 implemented a project on law enforcement, training and equipping Xe Pian NPA staff.</p>
	<b>Elefant Asia</b>	<p>Carries out vet-care visits to the domestic elephants in Beung Kiat Ngong</p> <p>Consultant for WWF/BCI on elephant tourism potential in the area</p> <p>Other relevant programs include support for elephant breeding/baby bonus, plus experience in</p>

		helping to set up mahout association (in Sayaboury).
	<b>GAPE</b>	GAPE has been working on community-based natural resource management in the area since 2001. Some activities focused specifically on fisheries management. Its Remote Village Education Support Project (RVESP), involving support for education, environmental education, agriculture, etc, has been implemented in 28 villages in Pathoumphone District. These activities were due to finish in 2010; eco-tourism work is also under development for 2011.
	<b>SUFORD</b>	The Sustainable Forestry for Rural Development project is a multilateral cooperation between GoL, Finland and the World Bank, aiming to introduce a nation-wide forest management system. Has included the establishment of production forest areas in a number of provinces, including Champassak, and support for participatory forest management with local villages. SUFORD has been working in a number of villages in the area, e.g. set up village forestry organizations in 9 BCI villages, plus nurseries in several villages.
<b>Private sector</b>	<b>Kingfisher Lodge</b>	Lao/Italian family operate guesthouse in Beung Kiat Ngong; offers activities as well as accommodation
	<b>Other tourism operators</b>	Community Guesthouse in Ban Kiat Ngong & community-based guides/treks Green Discovery Laos, a national company with tours to Bolaven, Xe Pian and Dong Hua Sao and investment in Dong Hua Sao zipline & treehouse project. Other international and national tour companies running programs to the area, such as Exotissimo and Diethelm.
	<b>Industry</b>	No industrial companies currently directly draw on the wetlands for water r

		<p>on Beung Kiat Ngong Ramsar site since it is upstream of Xe Khampho which is close to the site. This project is in the Planning Purchase Agreement stage (<a href="http://www.poweringprograss.org/">www.poweringprograss.org/</a>).</p>
<b>Other</b>	<b>Pakse City</b>	<p><b>Household businesses</b></p> <p>Household businesses are also an important source of income in the area, including handicrafts, transportation services, restaurants and small shops.</p> <p>Beung Kiat Ngong is located 56km south of Pakse City, the provincial capital of Champassak. Although Pakse receives few direct benefits from</p>











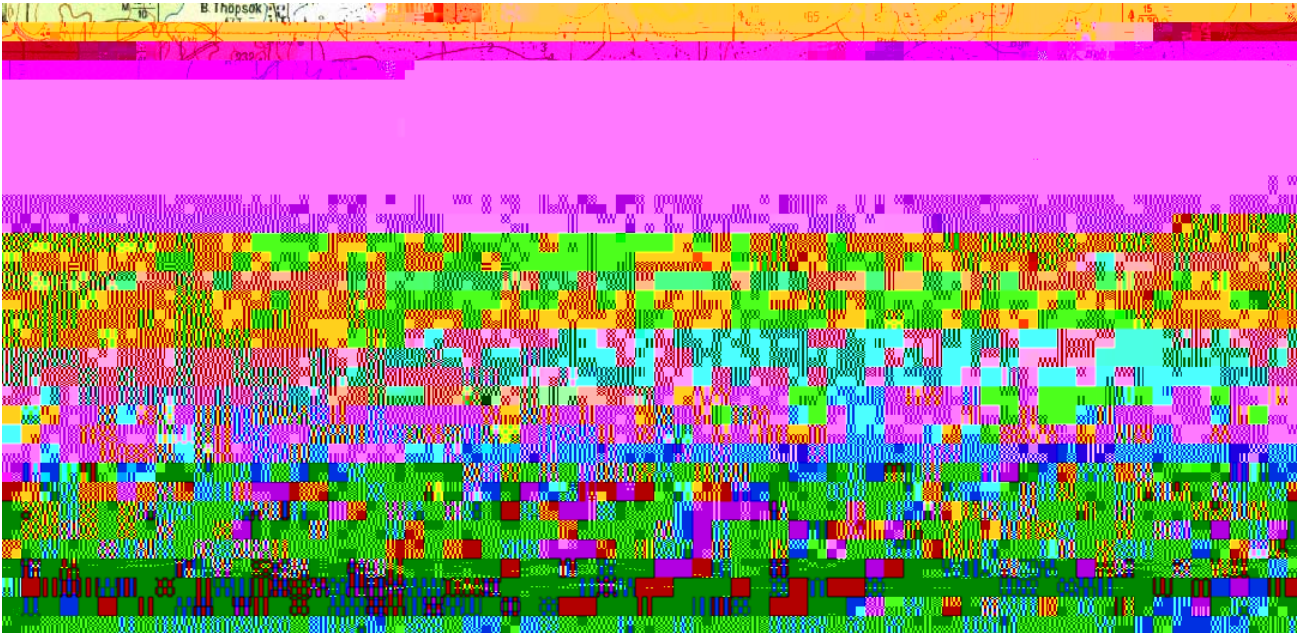
	Takuang			Pao	khuane	khuane	rice paddy	conservation pond
3.	Wang Mak Jeng	0.3	Kiat Ngong	Beung field	Done Nok Hor – End	Done Nok Hor – Begin	Mango tree, Done Mak Jeng	Fish conservation pond
4.	Wang Kuai	3.2	Kiat Ngong	To's rice paddy				Fish conservation pond
5.	Wang Yao	0.6	Kiat Ngong	Bounthavy's rice paddy			Soun's rice paddy	Fish conservation pond
6.	Wang Nong Na Mood	0.3	Pakka	None Hin Lang (small Dou tree)	Lee's rice paddy	Kork Hin Lang (Peuy Tree)	Pone Hin Lang (Nom's rice paddy hut)	Fish conservation pond
7.	Wang Nong Pa Poi	0.4	Palai	Kisang's rice paddy (village area)	Kok Lang near Papoi pond	Kok Lang near field	Upland rice fall to Papoi pond	Fish conservation pond
8.	Wang Kasai (Beung Kasai)	8.5	Palai	Hong Tami	Sai + Pheung's rice paddy	Irrigation	Hong Kae	Fish conservation pond
	<b>Total</b>	<b>14</b>						

### III. Specific conservation areas for certain activities

9.	Done Yai Time Pa Mouang	4	Kiat Ngong	Sing, Leum, Khem's rice paddy and Nong Lak conservation pond	Khamvong's rice paddy	Nu Phone's rice paddy or Na None		
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#### **Map 4: Wetland boundaries related to villages' patrolling responsibilities**



Source: Regulation on Wetlands (2010)

### **1.8 Threats and Risk Factors**

There are a number of factors (past, present or potential) adversely affecting the site's ecological character and the sustainable use of natural resources, including changes in land and water use.

The following are active threats to the wetland. These activities extract resources unsustainably and directly harm the environment:

#### **1.8.1 Overexploitation of natural resources and habitat degradation**

- *Overharvesting*: Beung Kiat Ngong's ecology and local livelihoods may be negatively affected by the potentially unsustainable harvest of aquatic resources (such as fish), wildlife and NTFPs. Prior to intervention through the LLS project, for example, Malva nut stands were being destroyed through unsustainable harvesting practices, driven by strong demand for this product. Illegal hunting of wildlife and use of illegal fishing equipment remain threats in and around the wetlands.

- *Former peat extraction*: Peat extraction for fertilizer was carried out in the northern part of the wetland for several years. Although this practice has ended, it had a negative impact on the wetlands, with the creation of numerous holes and the release of carbon dioxide.

- *Slash and burn/unsustainable agricultural practices*: There have been some indications that agricultural practices and the expansion of agricultural lands into the wetlands may pose a threat to the wetlands in the future. In addition, there are concerns that expansion of agricultural land is destroying bird habitats, which are further affected by changing

temperature and rainfall patterns as IUCN (2011 b) has shown. Despite the protection offered by the new Regulation and the site's Ramsar status, land use change remains a potential threat. Even NPAs in Lao PDR face problems from illegal encroachment and conversion into agricultural land or plantations, or the issuance of concessions for infrastructure or mining projects within their boundaries.

### 1.8.3 Lack of knowledge on biodiversity

Although it has long been recognised as an important area for biodiversity, little is actually known about the current status of biodiversity in the Ramsar site.

In terms of flora, William Duckworth's 2008 biodiversity survey in the Xe Pian and Dong Hua Sao NPA corridor provides the most comprehensive and up-to-date information available on birds and mammals. IUCN's 2009 survey provided some key information about fish, amphibians, and reptiles. Given the importance of fish for local livelihoods, it is important that in the future more extensive studies of fish be carried out. The Beung Kiat Ngong Wetland has not been adequately studied and surveyed, and therefore, there is a lack of detailed information on the fauna of the area. To achieve efficient conservation of biodiversity, knowledge is critical and should be improved. This is also critical for any other activity related to management or conservation of the wetland.

### 1.8.4 Low income from crop cultivation

The local yield from rice is quite low in the wetland (com villagers and department of Agriculture). As seen in paragraph 1.8.1 to increase production, many villagers tend to extend their paddy field by encroaching onto the wetlands. This extension of cultivated areas can have both environmental and long-term social effects by having a strong impact on the ecosystem and decreasing the ecosystem services provided by the wetland (NTFPs, flood management).

The lack of diversity in cultivation and the disappearance of local knowledge in seeding techniques and traditional cultivation techniques are factors that limit the income from agriculture in the wetland and tend to increase the vulnerability of households to economic influences, such as food price variations.

### 1.8.5 No benefit sharing from tourism

Environmental and social issues which may be associated with tourism expansion have not been properly studied or addressed. Pathoumphone District, including the wetlands and other sites such as Phou Asa, are attracting an increasing number of tourists. The Ramsar status of Beung Kiat Ngong, along with improved infrastructure and increased tourism numbers more generally, can be expected to boost the number of visitors in the future. Further assessment of the environmental and social risks of tourism in the area is required, along with measures to ensure that negative impacts are minimized while benefits are shared among the communities of the wetlands. If well-managed, tourism can offer an important contribution to local livelihoods and the management of the site.

### 1.8.6 Lack of awareness about the Ramsar site

Despite being designated as a Ramsar site in 2010 there is little awareness amongst the population and the NPA staff on what is actually a Ramsar site and what are the different regulations or the boundaries. Without "ownership" of the Ramsar site by the local community, all action in common is difficult and sustainability of objectives will be hard to



achieve. The lack of visibility of Ramsar in the field is a factor limiting any other actions and the understanding of the importance of the site. This lack of information/reference is a crippling limitation to achieving a good governance system in the field involving NPA and local official staff as well as community representatives.

#### 1.8.7 Lack of direct dialogue between the Provincial Ramsar Committee and the local communities

The Provincial Ramsar Committee is quite active and organized but direct dialogue between the committee and the local population is limited. Some representatives of the communities are members of the Ramsar Committee. However, greater incorporation of local communities in the planning process and the ownership of activities will be essential to ensure successful implementation of the management plan. For this, information, awareness and direct involvement of communities are critical.

# **Management plan for the Beung Kiat Ngong Ramsar site**

## II Evaluations and objectives

### 2.1 Ecological features

#### 2.1.1 Evaluation

As identified in paragraph 1.8.3, the Beung Kiat Ngong Ramsar site is important for preserving biodiversity and supports the populations of several threatened species. However, these values are difficult to quantify, because of the scarcity of scientific information about the site.

As one of the largest wetlands in Lao PDR, the site plays an important role in regulating water flow and improving water quality. These features led to the designation of the site as “a wetland of international importance” under the Ramsar Convention. Ramsar site management must prioritize conserving biodiversity and natural habitats, and protecting ecosystem services.

#### 2.1.2 Long-term objectives

Ensure conservation and active restoration of wetland functions, habitats and biodiversity.

#### 2.1.3 Factors preventing the achievement of li

## 2.1.4 Operational objectives

To address the threats described above, the following operational objectives have been planned:

- **Decrease overfishing and overharvesting** by organizing Community Fisheries within the communities involved and enforcing and improving management group processes for NTFPs.
- **Plan and control land use and land allocation** by implementing a revision of the current LUP and making it suitable for wetland conservation, and by revising current decrees, regulations and conservation zones with communities.
- **Restore habitats destroyed by human activities** by replanting wetland trees in degraded habitats and restoring zones degraded by peatland extraction.
- **Gather data about water management in BKN** by conducting a study, to plan management methods to restore the water level in BKN.
- **Assess the impact of the growing livestock population on the wetland** by conducting a study on cattle and sustainable grazing issues.
- **Enhance enforcement** by setting up a community patrol responsible for management and monitoring, and by conducting monthly meetings to discuss the patrol results, provide legal training and promote enforcement of regulations.
- **Improve knowledge of key species populations in the Ramsar site** by conducting biodiversity surveys in the wetland and disseminating the results to local communities and key stakeholders.
- **Improve knowledge of climate change vulnerability of wetlands and access to sustainable financing** by carrying out a climate change risk analysis on biodiversity and livelihoods and identifying sustainable climate change financing sources to support this.

## 2.2 Socio-economic

### 2.2.1 Evaluation

The wetland sustains more than 11,500 people and generates direct income of more than

not implemented. Securing food sources and livelihoods is directly linked with a key objective of the Ramsar Convention, “wise use of wetlands”, and is one of the main objectives to be achieved and maintained in the BKN wetland. By focusing on improving food security, we can also work on reducing pressure on natural resources, and ensure that

### 2.3.2 Long term objectives

Maintain and develop the cultural values of Beung Kiat Ngong

### 2.3.3 Factors influencing the achievement of long-term objectives

- Decrease in the elephant population and lack of information on Mahout tradition at the site
- Lack of information on Phou Asa and other historical heritage and traditions at the site.

### 2.3.4 Operational objectives

To address the threats identified above, the following operational objectives have been identified:

The Mahout tradition and local history and beliefs will be documented and disseminated at the local level and in the Province.

- **Documenting the Mahout tradition and local history and beliefs at site level** by recording (video, voice, and in writing) discussions, meetings, and interviews with elders and mahouts in the villages, and editing and distributing leaflets, short documents, and videos to local tourism office, partners, tourism agencies, cultural centers and tourists at site level.

## 2.4 Governance and management organization

### 2.4.1 Evaluation

Good governance is fundamental to the success of any management plan. Improved governance will ensure a common understanding of the challenges amongst the different actors, and will make sure the long term objectives are understood and shared. Working on awareness and governance is necessary to guarantee successful implementation of all activities of this plan.

### 2.4.2 Long term objective

*Improve and develop governance at site level.*

### 2.4.3 Factors influencing achievement of long-term objectives

- Low awareness about the Ramsar site.
- Lack of direct dialogue between the Ramsar Secretariat and the local communities.

### 2.4.4 Management plan objectives on improving governance and management organization

To address the threats listed above, operational objectives for the duration of the management plan will:

- **Centralize Ramsar site-related information** by creating a Ramsar office in the NPA office, providing and centralizing information on Ramsar.

- ***Improve the involvement of local communities in the management process*** by organizing regular meetings and participatory management events/activities.
-

### III Action plan/prescriptions

This section present the activities, management organization and budget that make up the 5 year management plan. Activities are classified by operational objectives and a short rationale presents why these activities have been selected as appropriate to address the threats/changes identified in the site description.

The activities have not been prioritized in the 5 year workplan. However, it is suggested that prioritization be done annually in the yearly workplan (see section III.3.2). The budget is indicative and likely to change.

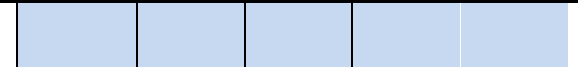
This workplan is not exhaustive and some activities (e.g., knowledge activities) will probably lead to new technical activities. The workplan is thus a living document and will be assessed and revised each year. Additional monitoring and assessment will be done at the mid-term and final stages.



with nets) overharvesting (bamboo shoots)  
Former extraction of peat  
Slash-and-burn farming  
Tree cutting reduce nesting habitats for birds  
Starting using chemicals

1.3. Restore habitats destroyed by human activities

1.3.1. Setup nursery for *Xanthoxylum lanceatum* and plantation by communities



I. Conserving biodiversity and environmental services

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III. Maintaining  
and developing  
the cultural  
values of  
Beung Kiat  
Ngong



**Budget :**

US\$ 2,100 for three meetings with cluster villages

US\$ 1,000 for drafting/revising the ToR on CFI.

US\$ 3,000 USD for three trainings

Implementation will be supported by the MWD Field Coordinator

US\$ 500/year for implementation support (equipment, staff expenses) = \$2,500

US\$ 1,000 for monitoring and evaluation

**TOTAL COST = US\$ 9,600**

➤ *Plan and control the use of land/natural resources and land allocation*

The degradation of natural habitats and the over-use of natural resources stem mainly from the lack of land-use planning. The existing LUP is out of date and does not provide an adequate framework for the sustainable use of the wetland. The existing regulation document also needs to be revised.

**Action 1.2.1**

**Revision of LUP and regulations of BKN Ramsar site**

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<p>Carry out monitoring of the tree planting activities two or three times during the planting season (responsibility of XP NPA);          At the end of the plantation season, hold an evaluation meeting to capture lessons learnt and develop plans for the year to come.          Determine the carbon storage capacities of the planned plantations and integrate these into the carbon project climate change scenario</p>
<p><b>Location :</b></p> <ul style="list-style-type: none"> <li>- Two nurseries in B. Kiat Ngong and B. Phapho or Phalai (3,000-5,000 seedlings per year)</li> <li>- Placement for tree plantation in 12 villages</li> </ul>
<p><b>Schedule :</b></p> <ul style="list-style-type: none"> <li>- 2013-2014: Set-up of two nurseries and production of 3,000 to 5,000 seedlings every year</li> <li>- 2012-2016: Plant trees on former <i>Xanthoxylum</i> forest areas.</li> </ul>
<p><b>Indicators of success :</b></p> <ul style="list-style-type: none"> <li>- By the end of the management plan, the area of <i>Xanthoxylum</i> forest has been restored to its former size of XX hectares</li> </ul>
<p><b>Budget :</b></p> <ul style="list-style-type: none"> <li>- US\$ 1,000 per year for one training, two meetings (DSA/ travels for participants, equipment, car rental) = \$ 2,000 for two years</li> <li>- US\$ 800 per nursery (purchase of bamboo, fabric, nails, plastic bags, etc) for two nurseries = \$1,600</li> <li>- US\$ 3,000 (allocate per year for seedling and plantation and protection) for seedlings production = \$6,000 for two years</li> <li>- US\$ 1,000 per year for monitoring and tree plantation action = \$5,000 for five years</li> </ul> <p><b>TOTAL COST: US\$ 14,600</b></p>

<b><u>Action 1.3.2</u></b>	<b><u>Restoration of degraded peatland zones</u></b>
<b>Management plan objective :</b> Restore habitats destroyed by human activities	
<b>Stakeholder and key actors :</b>	
<ul style="list-style-type: none"> <li>- This action will be the responsibility of the Provincial Ramsar Secretariat, with a technical lead by the Forest Resource Management Section and XP NPA.</li> <li>- At site level, the implementation team will include one staff from DoNRE and one staff from DAFO</li> <li>- Villagers will join the training, monitoring and implementation</li> <li>- All activities will be supported by the MWD Field Coordinator</li> </ul>	
<b>Action description :</b>	
<ul style="list-style-type: none"> <li>- Assessment of the economic and ecological value of peatland to Beung Kiat Ngong: Carry out a rapid biodiversity assessment of the area surrounding the peatland to determine the number of species that rely on peat. The study will also seek to determine the quality of the peatlands according to Ramsar standards. Focus group discussions in villages will be used to determine how local people use the peat and how it contributes to their income.</li> <li>- Study on restoration of damaged peat land: Carry out a field study to identify the aquatic plants that grow in and around the peatland. A short desk study will also be carried out to learn about relevant approaches to peatland restoration and sustainable harvesting that have been successful elsewhere. A method for encouraging the growth of key vegetation and piloting sustainable harvesting of peat</li> </ul>	



- All activities will be supported by the MWD Field Coordinator

**Action description :**

- Step 1: Meeting with heads of 12 villages to introduce and explain the action and select volunteers from 12 villages (7-8 people per village).
- Step 2: Training to volunteers from 12 villages on regulation, simple biodiversity assessment, LUP, etc. This training will focus on how to record and solve problems related to the regulation in the Ramsar site. Training delivered by the MWD field coordinator, XP NPA and Forest Resource Management section.  
1 person per village patrol will receive complementary training on regulation and law on the Ramsar site. He will be the legal focal point for each village on legal issues and will organize a meeting once a month with villagers to explain the regulation and results of the patrol.
- Step 3 : Implementation of patrolling (Survey and recording 3 form: Biodiversity form,



<ul style="list-style-type: none"> <li>- All heads of the villages will join the meeting and will invite some community members to join as well (representatives of fishermen, women group, ethnics groups, NTFP processing group, etc.).</li> <li>- Prov. Ramsar secretariat and Dis. Implementing team staff will join the meeting</li> </ul>
<p><b>Action description :</b></p> <ul style="list-style-type: none"> <li>- This monthly meeting will be an opportunity to do a regular status check on the implementation of the management plan with the communities and to discuss any subjects related to the conservation and management of the Ramsar site.</li> <li>- The MWD field coordinator will then compile all requests, comments, ideas from the community to present to the SC and Local authority (District level)</li> </ul>
<p><b>Location :</b></p> <ul style="list-style-type: none"> <li>- 3 cluster villages (Sanod, Phapho and Saming) on 5<sup>th</sup> to 7<sup>th</sup> every month.</li> </ul>
<p><b>Schedule :</b></p> <ul style="list-style-type: none"> <li>- Between the 5<sup>th</sup> to 7<sup>th</sup>, every month (2013-2017) except in July, August, September and October (plantation and harvest seasons).</li> </ul>
<p><b>Indicators of success :</b></p> <p>By the end of 2013 the monthly community meetings are well attended and led by the communities,</p> <p>By the end of the management plan this monthly meetings have become a habit for communities and helped guiding the management process.</p>
<p><b>Budget :</b> 120\$ per meeting per cluster village ( 8 times per year) = 960 \$ per year/cluster = <b>2880 \$ per year = 14 400 \$ for 5 years</b></p> <p><b>TOTAL COST : US\$ 14,400</b></p>

➤ *Improve the knowledge and monitoring of key species populations in the Ramsar site*

Although a number of studies have already been undertaken on the flora and fauna of the Beung Kiat Ngong Wetlands, our knowledge of the biodiversity of the site remains highly incomplete. Without such information, it is difficult to plan specific activities for the conservation of species.

<b>Action 1.5.1</b>	<b><u>Scientific biodiversity survey and monitoring</u></b>
<p><b>Management plan objective:</b> Improve the knowledge and monitoring of key species populations/habitats in the Ramsar site</p>	
<p><b>Stakeholder and key actors:</b></p> <ul style="list-style-type: none"> <li>- The action will be coordinated by DoNRe and IUCN.</li> <li>- Technical assistance will be provided by a consultant (biodiversity specialist).</li> <li>- Villagers will become involved in the process through training and group discussions on biodiversity, and will provide information to supplement the survey done by the consultant.</li> </ul>	

**Action description:**

<b>Action 1.6.1</b>	<b><u>Preliminary study on water and water management in the Ramsar site</u></b>
<b>Management plan objective:</b> Gather data about water management in BKN to plan	
<b>Stakeholder and key actors :</b> <ul style="list-style-type: none"> <li>- The general coordination of the action will be led by DoNRE and IUCN.</li> <li>- The technical implementation of the activity will be carried out by a consultant, a specialist on hydrology, irrigation, etc. Department of Irrigation in MAF and IWMI will lead the study.</li> <li>- Villagers and different stakeholders will get involved in the process through meetings and workshops to participate in the situation analysis and proposition of solutions.</li> </ul>	
<b>Action description :</b> Water management is a key requirement for the sustainable use of the Ramsar site. This study will focus on trying to do a preliminary assessment of the threat and changes in hydrology in the wetland and to propose preliminary guidelines for further study and sustainable management. <ul style="list-style-type: none"> <li>- Desk study on hydrology, water use in the BKN Ramsar site;</li> <li>- Interviews with different actors on water use and water management in BKN;</li> <li>- Field visit in key locations for water management;</li> <li>- Drafting report on water issues in BKN;</li> <li>- Meeting with stakeholders to discuss potential solutions and methods;</li> <li>- Final draft of the report including preliminary management measures and budget.</li> </ul>	
<b>Location:</b> The study will focus on the Ramsar site itself as well as any key features for hydrology in the buffer zone or in the catchment area.	
<b>Schedule:</b> Dry and wet season in 2013	
<b>Indicators of success:</b> By 2013, the Ramsar Provincial Committee has a better knowledge of water issues in the Ramsar site. By 2013, preliminary technical solutions respecting biodiversity, natural hydrology of the wetland and livelihood issues have been proposed to manage water use with detailed guidelines on how to conduct further studies and assessment . By the end of the management plan, water use is sustainable and an Eflow approach has been adopted for the Ramsar site.	
<b>Budget :</b> Study on water management: US\$ 10,000 for consultancies and related expenses (travel costs, DSA, etc) US\$ 4,000 for meetings and workshops with stakeholders. <b>TOTAL COST: US\$ 14,000</b>	

➤ ***Assess the impact of growing cattle population on the wetland***

Cattle grazing is an important source of income for the communities in the wetland but also places high pressure on natural habitats. To ensure that cattle grazing is sustainable, more information is needed. This management plan therefore proposes to study the potential for sustainable grazing in the Ramsar site and to provide further recommendations.

<b>Action 1.7.1</b>	<b><u>Preliminary study on cattle impact on the wetland</u></b>
<b>Management plan objective:</b> Implement a preliminary assessment of the impact of the growing cattle population on the wetland.	



threats on biodiversity and on livelihoods. A full cycle carbon project will be designed and registered under the Verified Carbon Standard (VCS)

**Action 2.1.1**

**Set up organic fertilizer and vegetable organic groups**

**Management plan objective: Increase the yield from rice cultivation and diversify cultivation**

**Stakeholder and key actors :**

-

2. Training on organic fertilizer production:	2,500 USD
3. Training on vegetables growing production:	3,000 USD
4. Build drying fertilizer and equipment/materials	15,500 USD
5. Monitoring and follow up on both fertilizer and growing organic vegetables	1,000 USD
6. Study tour on growing organic vegetables	2,000 USD
7. 2 Stakeholder consultation meeting	1,200 USD
<b>TOTAL COST : US\$ 26,400</b>	

<b>Action 2.1.2</b>	<b><u>Training on traditional rice cultivation</u></b>
<b>Management plan objective : Increase the yield from rice cultivation and diversify cultivation</b>	

**Stakeholder and key actors :**

- This action will be the responsibility of the Provincial Ramsar secretariat (Led by Forest Resource Management section) and XP NPA
- One teacher from CPS Agriculture college will be the trainer
- One staff from DAFO will join the implementation
-





<p><b>Location :</b></p> <ul style="list-style-type: none"> <li>- In 4 core villages that have Malva nut trees, focus on Patrolling, Community management and Women's processing group.</li> <li>- in 8 core villages, focus on all NTFPs and Women group processing product</li> </ul>
<p><b>Schedule :</b></p> <ul style="list-style-type: none"> <li>- Early 2013 and 2016 that year are high seasons of Malva nut harvesting</li> <li>- From 2013 to 2017 for other NTFPs, with an increased activity on non-harvesting years for malva nuts.</li> </ul>
<p><b>Indicators of success :</b></p> <p>By the end of 2013, NTFP groups are implemented and working. By the end of the management plan, the income from NTFP use has increased and a benefit sharing system has become the rule.</p>
<p><b>Budget :</b></p> <p>2100 USD for 3 meetings with cluster villages 1000 USD for drafting/revising the documents about NTFP buying/selling/processing and benefit sharing. 6000 USD for 4 trainings Implementation will be supported by the MWD field coordinator 1500 USD for final meetings each year = 7500 \$ <b>TOTAL COST = US\$ 16,600</b></p>

<b>Action 1.1.1</b>	<p><b><u>Create Community Fisheries</u></b></p> <p>(this action is already included in the section on "Conserving biodiversity and environmental services")</p>
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➤ *Improve the tourism offer and increase benefit-sharing*

Tourism has been identified as an important source of income for some members of the community. It also provides a way to promote local culture and history. Nevertheless, this activity could be more developed in a sustainable way, providing more income for the communities. The benefits so far only go to some individuals or companies whereas others opportunities for diversification of tourism activities and benefits sharing could be developed. This increased and shared income based on ecotourism would also encourage the communities to preserve natural habitats.

<b>Action 2.3.1</b>	<p><b><u>Support diverse tourism activities by drafting a tourism strategy</u></b></p>
<p><b>Management plan objective: Improve the tourism offer and share benefits with the community more</b></p>	
<p><b>Stakeholder and key actors:</b> This action will be a collaborative activity by NPA staff, villagers, tourism companies in Pakse and Hotel and guesthouses in Beung Kiat Ngon.</p> <ul style="list-style-type: none"> <li>- This action will be under the responsibility of the Provincial Ramsar secretariat, the District Tourism office and XP NPA with the technical support of an ElefantAsia consultant for the drafting of the tourism strategy on elephants.</li> </ul>	

- At the site level this action will require the involvement of the different heads of village, the elephant owners, the home stay owners, Kingfisher Ecolodge and any other local companies or individuals involved in tourism activities.
- At another time, hotels, tour companies and mini-bus association tours will be involved in the discussion with support from the Provincial Tourism office.

**Action description :**

The project will proceed along the following steps:

Reviewing the WWF project and ongoing tourism activities to find lessons learnt. This will include meeting with tourism companies and hotels, interviews with villagers and home stay owners, NPA staff and elephant owners. Interviews with tourists on site will be carried out to identify satisfaction level and needs.

Workshop on-site to present and discuss the findings of the surveys and reviews. Assessment of the situation, identification of gaps and discussion of solutions. The discussion will focus on how to improve current services and develop new markets and activities that will benefit to a wider range of beneficiaries. Develop benefits-shared, community-based tourism and community-based homestays. Propose and discuss longer packages such as ecovolunteering for several days to week-long including homestay, elephant feeding and foraging, community work, etc. Seek the involvement of tourism private investors in community tourism (Kingfisher Ecolodge, Green Discovery, etc.). Implementation and monitoring process will also be discussed.

Draft a sustainable tourism strategy in BKN endorsed by the Ramsar provincial committee, private companies and local communities

Plan a budget for starting new tourism projects and marketing

Raise funds to implement the activities

**Location :** 8 villages of the core Ramsar site.

**Schedule :** discussions and tourism strategy in 2013 and then implementation of the strategy.

**Indicators of success :**

By the end of 2013 a sustainable ecotourism strategy including development of new tourism

### 3.2.3 Maintaining and developing the cultural values of Beung Kiet Ngong Ramsar site

The Beung Kiat Ngong Ramsar site holds important cultural value. Phou Asa mountain and the Mahout tradition, rare in Lao PDR, can be found there. Nevertheless, compared to other cultural sites in the province, BKN has not benefitted from much research and its great cultural value is not well-known. This management plan therefore proposes to document the site's local history and culture, and to record, disseminate and highlight this cultural value.

➤ **Document the Mahout tradition, local history and beliefs at site level**

<b>Action 3.1.1</b>	<b><u>Record local knowledge and edit communication documents on Mahout tradition and local history of the site</u></b>
<b>Management plan objective: Document the Mahout tradition and local history and beliefs at site level</b>	
<b>Stakeholder and key actors:</b> This action will be a collaborative activity by the Department of culture and tourism of Champassak, Wat Phou world heritage staff, journalists of the Vientiane Times, heads of villages, Mahouts, and elders and local officials with coordination from the Provincial Ramsar Secretariat and the MWD field officer.	

**Action description :**

### 3.2.4 Improve the governance and management organization

#### ➤ *Centralize Ramsar site information*

Information on Beung Kiat Ngong Ramsar site has been issued through different studies from various organizations. The management plan implementation will require staff dedicated to consolidating this information. A special office based on the site will allow staff to centralize information on the Beung Kiat Ngong Ramsar site, to host the Ramsar

patrolling group has not proven efficient, so a new organization, combined with trainings, is proposed in this management plan. A new patrolling system and regular meetings in the community will ensure laws, management and conservation activities are properly monitored. It will also ensure an increased awareness among the population.

<b>Action 1.4.1</b>	<p><b><u>See action "Set up patrolling/management/monitoring community group"</u></b>          (this action is already included in the section on "Conserving biodiversity and environmental services")</p>
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➤ *Improve the coordination between local authorities and village levels*

There is a strong need for coordination between different Ramsar committees and the field level. Communities will be directly impacted by management measures and a clear and regular dialogue and information exchange has to be carried out on a regular basis. This management plan proposes to organize opportunities for all stakeholders to discuss topics linked to the management plan. This will be an opportunity to reinforce the bottom up approach, and involve communities in the leadership of management of the Ramsar site.

<b>Action 4.3.1</b>	<p><b><u>Quarterly meetings between the Ramsar Steering Committee, the Provincial Ramsar Secretariat, and the district implementing team</u></b></p>
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**Budget :**

Prov. Ramsar secretariat meeting 300\$ per 1 meeting = 1200\$ per year = 6000 \$ for 5 years.

Ramsar Steering Committee meeting 450\$ per 1 meeting = 900 \$ per year = 4500 \$ for 5 years.

**TOTAL COST: US\$ 10,500**

**Action 1.4.2**

**See action “Monthly community meetings on management, legal and regulation issues in the Ramsar site”**

(this action is already included in the section on “Conserving biodiversity and environmental services”)

➤ *Improve the knowledge of customary laws at site level and offer recommendations for governance*

Customary rights often govern the use of natural resources at the local level. These taboos, beliefs, and customs are often as important as village rules and provincial or national laws for the communities. A better understanding of these customs and of the links between customary laws and statutory laws is critical to drafting effective regulation documents for the site and to have them accepted by the local communities. This management plan proposes to document these customary rules and to use the knowledge gathered to offer recommendations for a statutory regulation document for the site.

**Action 4.4.1**

**Document the customary rights governing natural resources use in the Beung Kiat Ngong Ramsar site**

**Management plan objective:** Improve the knowledge of customary laws at site level and provide recommendations for governance

**Stakeholder and key actors:** This action will be the responsibility of the Prov.Ramsar Secretariat (Led by PoNRE) and with support from the Ministry of justice. Head of villages, spirit guardians and elders will be closely associated in the process.

**Action description :**

The project will proceed along the following steps:

One group discussion per village on the customary right governing the use of natural resources;

the regulation document work ;
<b>Budget :</b> Organisation of 12 group discussions : 250 USD per group discussion = \$ 3000 GIS mapping : \$ 1000 Edition and publication of the documents : \$ 3000 <b>Total budget : US\$ 7000</b>

➤ *Raise awareness about the RAMSAR site and improve knowledge of Ramsar legal and management issues*

The Ramsar convention and its concepts and guidelines are relatively new for Lao P.D.R., and the different Ramsar committees are mostly unknown to communities. Understanding what a Ramsar site is, wise use of the wetland, and guidelines and objectives of the convention are critical to implement an efficient and participative management plan. This management plan therefore proposes to organize trainings, awareness events and exchange visits on Ramsar for the local stakeholders to fully understand what living on a Ramsar site means. This also includes clear demarcation and “signaletics” on the field.

<b>Action 4.5.1</b>	<b>Trainings on Ramsar convention</b>
<b>Management plan objective : Improve knowledge of Ramsar legal and management issues</b> <b>Stakeholder and key actors :</b> -	

**Action 4.5.2**

**Exchange visit to another Ramsar site  
in a neighboring country**





- Community makes sign-board (labor by

### **3.3 Schedule and workplan**

#### 3.3.1 Five-year workplan

### 3.3.2 Annual planning

A yearly schedule will be drafted each year, considering the progress of each action and the need for some activities to be implemented.

This annual planning will prioritize the activities for the year to come.

This document will specify each period for implementation of each activity in the most detailed way possible. It will include specific dates for specific events and at least the month of implementation for technical activities. Any major change in the annual plan or in the activities will have to be justified and approved by the Ramsar provincial secretariat.

This yearly schedule will be the basic tool of the Ramsar management team and the MWD officer. Annual planning will have to be discussed at the community level first and then approved by the Ramsar Provincial secretariat before the 31<sup>st</sup>

**BKN Management diagram or Structure**

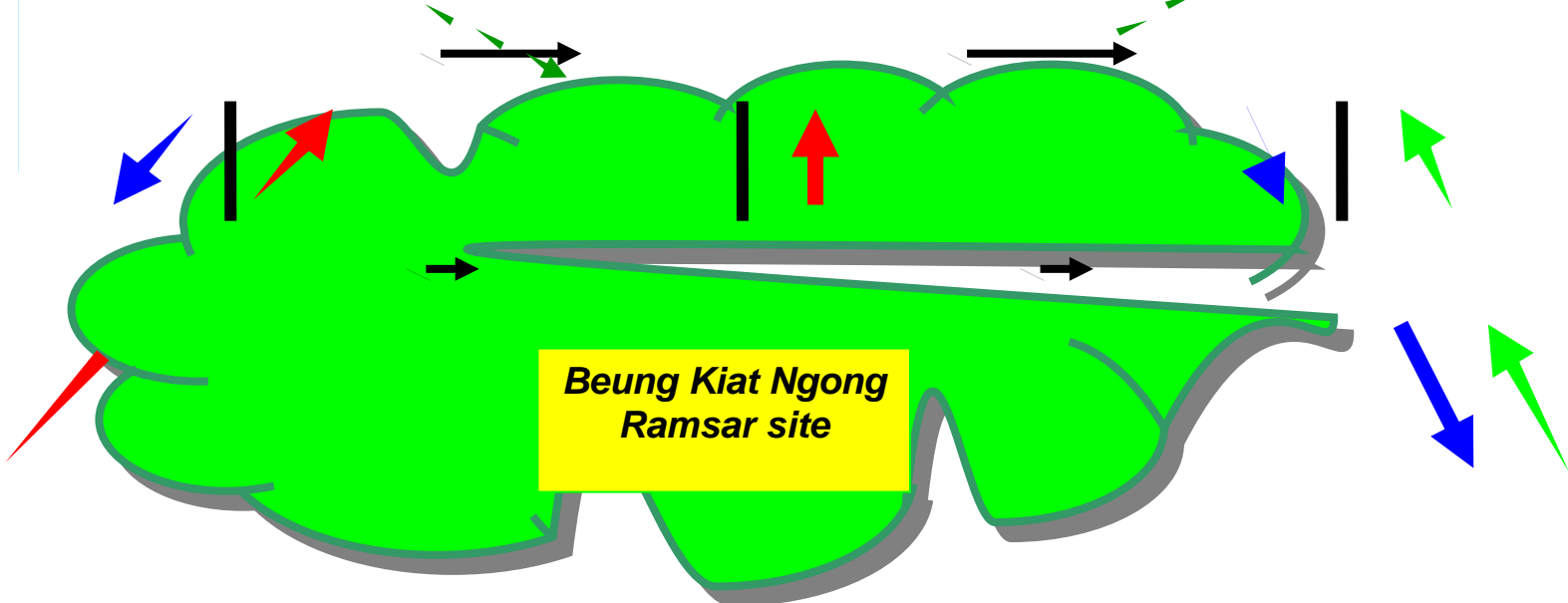
**Provincial Ramsar Steering committee**  
 Decree 02/....., Date 25<sup>th</sup> Nov 2010 Signed by Vice Prime Minister

30%

MWD Project

Other Project

70%



Remark: , Normal contact Report direct to Supervise Support & Advice

Provincial & District Village/Villages Decision allocations line, Cluster Decision Making by and Decision Making by 70%

### 3.4.2 Right and Responsibilities of Provincial Ramsar Steering Committee

The Champassak Provincial Ramsar Steering Committee is in charge of

- the overall management and conservation of the wetlands and peatlands of the Beung Kiet Ngong Ramsar site within the village, district, province and surrounding areas,
- supporting and proposing new locations for Ramsar sites in the Province to the Ramsar National Steering Committee,
- releasing the necessary agreements, decrees and regulations to manage and conserve wetlands and peatlands sites within the village, district, province and surrounding areas,
- proposing a new committee in case the existing committee is removed to accept the new position,
- considering and designating the human resources into the secretariat team,
- launching an awareness campaign for the local community,
- resolving any problems and conflicts which may occur in the management and conservation of the wetlands and peatlands within the village, district, province and surrounding areas,
- finding funding sources and utilizing them to implement the management and conservation activities for the wetlands and peatlands sites within village, district, province and surrounding areas,
- coordinating and cooperating with the Ramsar National Steering Committee to implement the management and conservation activities for the wetlands and peatlands sites within the village, district, province and surrounding areas.

### 3.4.3 Right and Responsibilities of Provincial Ramsar Secretariat:

The provincial Ramsar secretariat is responsible for:

- acting as the secretariat for the Provincial Steering Committee,
- providing coordination for the Field implementation Team and Provincial Steering Committee and being a support unit for the Ramsar Convention.
- preparing monthly, quarterly and annual workplans in accordance with the approval of participatory management workplans by the Steering Committee, and implementing and summarizing of its interim progress to report to the Ramsar District Committee.
- preparing meeting minutes and summarizing the results of the Local Steering Committee to report to the Provincial and National Steering Committees,
- summarizing the implementation of activities and proposing the workplan for the meeting of the Provincial Steering Committee,
- coordinating with other local agencies and stakeholders to implement the activities in accordance with the workplan to manage and conserve the wetlands within the respective areas,

- coordinating with the National Secretariat Committee to monitor the trends of the Ramsar Convention,
- proposing that the Provincial Steering Committee consider and agree to fully staff the secretariat unit,
- Implementing the assigned activities based on the agreement made in the meeting and identified by the Provincial Steering Committee.

#### 3.4.4 Capacity building

The capacity building process will be supported by IUCN Mekong water dialogue officer and IUCN Water and Wetlands programme as part of the Mekong Water Dialogue project.

Support, training and supervision will be provided on request and as initiative of IUCN Lao PDR MWD project for 2013 and 2014.

After 2014, local staffs are supposed to be independent and trained and able to carry out trainings and capacity building operations for new staff.

Depending on funds, IUCN Lao PDR will provide additional capacity building activities.

#### 3.4.5 Equipment

Equipment needed is detailed in each activity. For general needs (transportation, office equipment) the NPA equipment and equipment provided by PoNRE will be used. The budget for different activity costs planed in this management plan will be priority allocated to specific equipment for these specific activities but can be also use to pay for general expenses (computer, software, car repair..)if budget is left, after agreement from the different donors.

### 3.5 Monitoring

#### 3.5.1 Annual review

Regular reviews are critical. To ensure effective implementation of the management plan, regular reports and assessments will be required.

As a key component of the monitoring system, it is suggested that a yearly report be prepared by the management team, assessing progress against each objective and action on the basis of the success indicators identified in the management plan.

The first draft of the report will be discussed in an annual workshop involving all the stakeholders/ partners of the management plan from village level to province level. This annual workshop will be the opportunity for different feedbacks from these





### 3.6 Indicative budget

MANAGEMENT PLAN ACTIVITIES	ACTIVITY COST (for 5 years)	SCHEDULE				
		2013	2014	2015	2016	2017
1.1.2. Setup community Fisheries system	9,600	4,600	2,750	750	750	750
1.2.2. Revision of LUP and regulations of BKN Ramsar site	28,300	27,300				1,000
1.3.3. Setup nursery for Xanthoxylum lanceatum and plantation by communities	14,600	6,600	5,000	1,000	1,000	1,000
1.3.4. Restoration of degraded peat land zones	2,700	2,700				
1.4.1. Setup patrolling /management/ monitoring community group	10,800	4,880	1,480	1,480	1,480	1,480
1.4.2. Monthly community meetings on legal and regulation issues in the Ramsar site and on patrol result	14,400	2,880	2,880	2,880	2,880	2,880
1.5.1. scientific biodiversity survey and monitoring	30,000	15,000				15,000
1.6.1. Preliminary study on water and water quality in the Ramsar site	14,000	14,000				
1.7.1. Preliminary study on cattle impact on the wetland	3,500	3,500				
1.8.1. Climate change risk analysis on biodiversity and livelihoods and identify sustainable climate change financing sources	40,000	20,000	20,000			
2.1.1. Setup organic fertilizer and vegetable organic group	26,400	26,400				
2.1.2. Training on traditional rice cultivation	8,000	4,000	4,000			
2.2.1. Setup buying/ selling/ processing group for NTFPs and aquatic products	16,600	10,600	1,500	1,500	1,500	1,500
See action Activity 1.1.1. "Create CFI in BKN"						
2.3.1. Supporting diverse tourism activities by drafting a tourism strategy	7,500	7,500				
3.1.1. Record local knowledge and edit communication documents on Mahout tradition and local history of the site	7,000		7,000			
4.1.1. Creation of a site-based Ramsar office	32,000		32,000			
See activity 1.4.1. "Setup patrolling/ management/ monitoring community management group"						
4.3.1. Quarterly meeting between SC, RS, and district implementing team	10,500	2,100	2,100	2,100	2,100	2,100
See activity 1.4.2 "Monthly community meetings on legal and regulation issues in the Ramsar site and on patrol"						
4.4.1. Document the customary right governing natural resources use in the BKN Ramsar site	7,000	4,000	3,000			
4.5.1. Training on Ramsar convention	4,000	2,000	2,000			
4.5.2. Exchange visit to another Ramsar site in a neighboring country	7,000	7,000				
See activity 1.4.2. "Monthly community meetings on legal and regulation issues in the Ramsar site and on patrol results"						
4.5.3. Organizing 2 events per year for WWD and Tree plantation day	10,000	2,000		2,000	2,000	2,000
4.5.4.						

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## **ANNEXES**

**Annex 1: Complete list of bird species reported in 2008 BCI biodiversity survey (Duckworth, 2008)**













