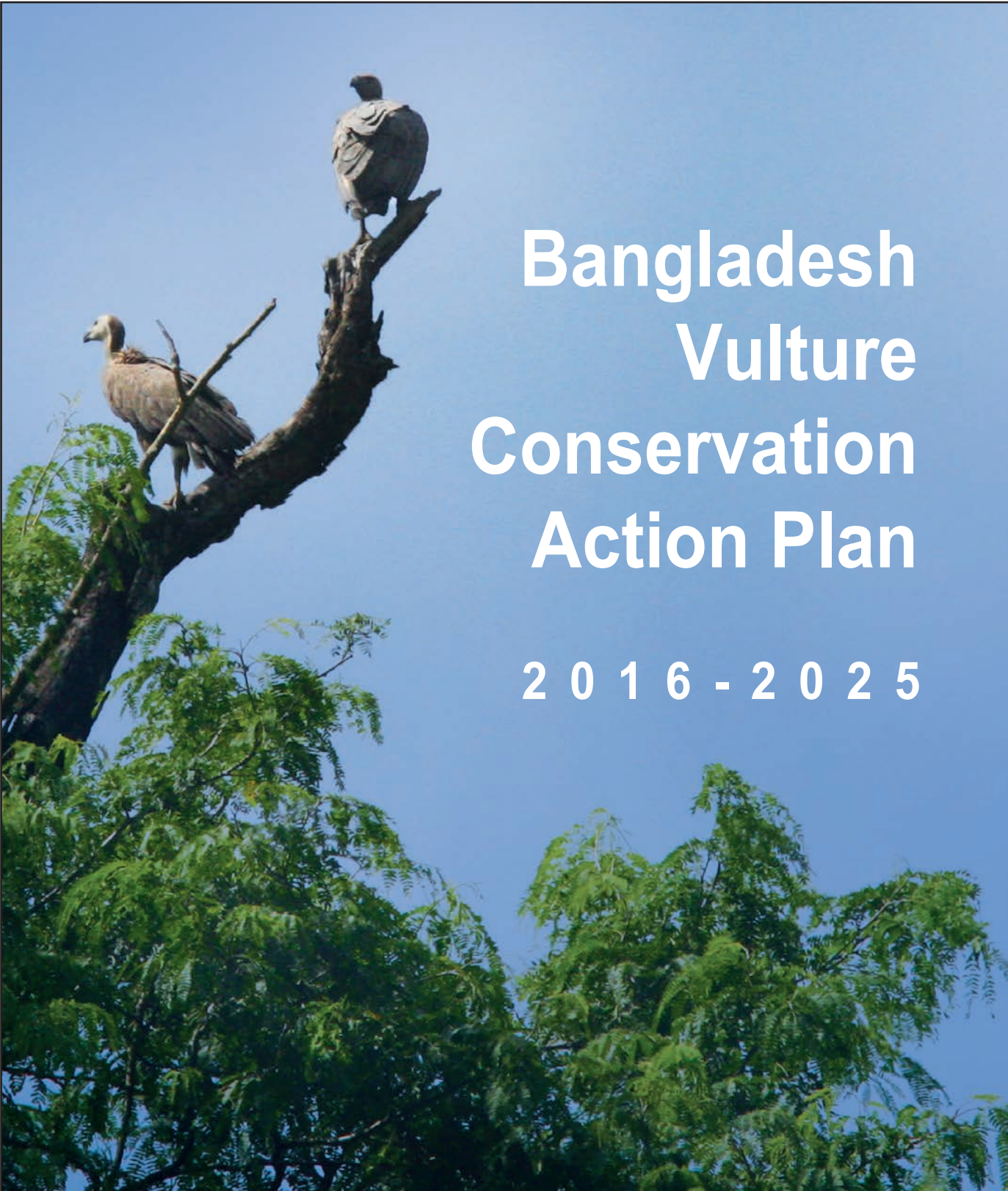




Bangladesh Vulture Conservation Action Plan

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BANGLADESH VULTURE CONSERVATION ACTION PLAN 2016-2025



Bangladesh Forest Department
Ministry of Environment and Forests
Government of the People's Republic of Bangladesh
2016

**Review Team**

A B M Sarowar Alam
Khadija Rawshan
Tarik Kabir
Sakib Ahmed
Ashit Ranjan Paul
Khorsheda Yasmeen
M. Monirul H. Khan
Ishtiaq Uddin Ahmad

Design:

Jahangir Alam

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FOREWORD

Bangladesh has a record of seven vulture species but unfortunately, the vulture population of Bangladesh has went through a catastrophic decline similar to the decline seen across South Asia. Overwhelming evidence from myriad scientific literatures confirm that veterinary drug diclofenac (a Non-steroidal anti-inflammatory drug or NSAID), widely prescribed and used for cattle treatment in South Asia, is responsible for the drastic drop of vulture population.

Taking account of the evidence, Government of Bangladesh, in effort to save the vultures, has banned the production, distribution and sale of veterinary diclofenac in 2010, and later declared two Vulture Safe Zones (VSZ-1: 19,663.18 km² and VSZ-2: 27717.26 km²) in 2014 - both decisions reflect the state's commitment to vulture conservation. Regrettably, diclofenac is still available at border areas of Bangladesh; moreover other NSAIDs like ketoprofen and flunixin have been found to be toxic to *Gyps* vultures. Additionally, habitat loss and food shortage have always been a threat to the vulture population in Bangladesh. Thereafter, a concerted effort to conserve the last surviving vultures in Bangladesh is much indispensable.

The present initiative to formulate “Bangladesh Vulture Conservation Action Plan” is a part of greater effort initiated by Government of Bangladesh to conserve country's biodiversity through “National Biodiversity Strategy Action Plan for Bangladesh”. The action plan is prepared based on the lessons learnt from “White-rumped Vulture (*Gyps bengalensis*) Conservation in Bangladesh: Establishment of the Toxic Drug Free Vulture Safe Zones (VSZ) and Monitoring of the Population Trend”, which is jointly implemented by IUCN Bangladesh and Bangladesh Forest Department funded by the World Bank and knowledge gathered from cutting-edge conservation efforts on vultures around the world. In collaboration with concerned agencies, this animated document is expected to provide a platform to implement the proposed actions and materialize the sighted vision through generating financial and technical resources.

I am grateful to IUCN Bangladesh for the devotion and hard work in assisting us to bring out this action plan. Finally, I hope the successful implementation of this action plan will not only build a safe future for vultures, but also account for the ecosystem services of vultures in Bangladesh.

Istiaque Ahmad

Secretary

Ministry of Environment and Forests

PREFACE

The vultures of Bangladesh, and indeed, all over the world are in trouble. Over the past couple of decades, 99.9% of the vulture population has disappeared from South Asia. In Bangladesh as well, the vultures have seen catastrophic decline in their population. The primary reason for this ecological disaster is the effects of veterinary non-steroidal anti-inflammatory drugs (NSAID) used in cattle.

In an effort to save the remaining vultures of Bangladesh, the Government of Bangladesh has banned the most harmful of all the NSAIDs, diclofenac in 2010. The formation of the Bangladesh National Vulture Recovery Committee (BNVRC) in 2013 was also a step of the government to further the vulture conservation initiatives in Bangladesh. Previously, in 2012 the Regional Steering Committee was established dedicated to international vulture conservation in South Asia where Bangladesh is also a part. In all this, the Bangladesh Forest Department has been an integral part, working tirelessly for the cause of vultures.

The Bangladesh Forest Department has been awarded the Strengthening Regional Cooperation for Wildlife Protection (SRCWP) project by The World Bank. A sub-project of SRCWP on vulture conservation in Bangladesh was awarded to IUCN Bangladesh in 2014 entitled “White-rumped Vulture (*Gyps bengalensis*) Conservation in Bangladesh: Establishment of the Toxic Drug Free Vulture Safe Zones (VSZ) and Monitoring of the Population Trend”. IUCN Bangladesh with the Forest Department, helped reduce the toxic drugs through community based Vulture Conservation Teams (VCT), increase in vulture population and declare the country’s first government approved Vulture Safe Zones in Sylhet and Khulna. Furthermore, all the necessary baseline was established, use of safe alternative drugs increased, community based vulture feeding station was formed along with many other achievements.

As a part of this forward momentum, a National Vulture Conservation Action Plan is formulated under this project for the long term conservation of vultures and vulture habitats. The plan incorporates the knowledge accumulated from the vulture project in Bangladesh and important learning from the initiatives at the forefront of vulture conservation around the world. The plan also accommodates comments and suggestions from world renowned conservationists, experts and professionals along with other stakeholders. This vital document is expected to be a stepping stone for the implementation of the recommended actions and in achieving the desired objectives with the collaboration of concerned authorities and technical prowess.

I would like to thank IUCN Bangladesh for their extraordinary efforts in saving the last of our vultures. The Forest Department promises to keep on working in making sure the vultures of this country are safe. Finally, I believe working hand-in-hand, we will be able to protect these charismatic species from extinction.

Md. Yunus Ali

Chief Conservator of Forests
Bangladesh Forest Department

ACKNOWLEDGEMENT

IUCN Bangladesh would like to acknowledge the World Bank for supporting the Strengthening Regional Cooperation for Wildlife Protection (SRCWP) project.

We would like to show our heartfelt gratitude to Dr. Kamal Uddin Ahmed, former honorable Secretary and Md. Nurul Karim, Additional Secretary (Environment) of the Ministry of Environment and Forests and the esteemed Ministry for the encouragement and support.

Our sincere gratitude to the Bangladesh Forest Department for awarding us this sub-project on conservation of the last of our vultures and for the constant cooperation in every step of the way.

We would like to acknowledge the Chief Conservator of Forests, Md. Yunus Ali and present Project Director of the SRCWP project, Abdul Mabud as well as the former Project Director, Md. Akbar Hossain for their support in this endeavor. Thanks to Ashit Ranjal Paul, Conservator of Forests, Wildlife Circle, Forest Department.

We are indebted to the Bangladesh National Vulture Recovery Committee and its members for providing us with guidelines, helping in advocacy work and supporting our activities. We also thank the Regional Steering Committee for their efforts in vulture conservation, not only in Bangladesh but all over South Asia.

Thanks should be given to Chris Bowden, Co-Chair of the IUCN Vulture Specialist Group, Dr. Nic Masters, Head of Veterinary Services, ZSL-London Zoo, Dr. Haseeb Md. Irfanullah, Programme Coordinator, IUCN Bangladesh, Mr. Enam Ul Haque, Founder, Bangladesh bird club, our consultants, experts, volunteers, Bangladesh bird club and all of our friends and well-wishers.

Last but not the least, we would like to thank the local communities of the two Vulture Safe Zones and the members of the Vulture Conservation Team, without whom vulture conservation would have been impossible.

Special thanks to all the staff of the vulture project.

Ishtiaq Uddin Ahmad

Country Representative

IUCN Bangladesh

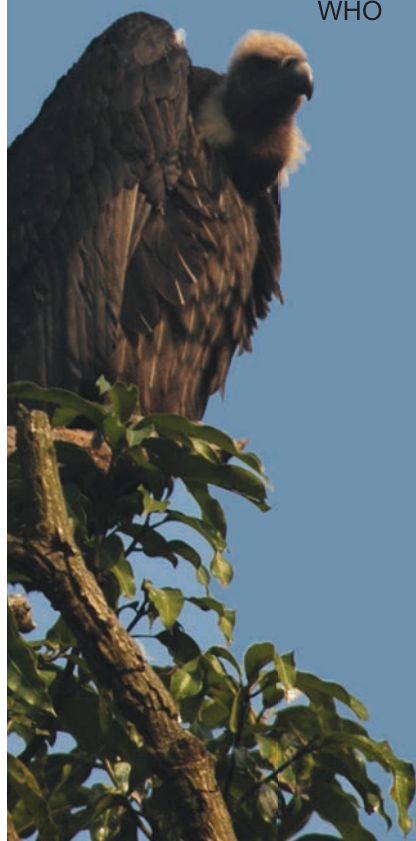
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ABBREVIATIONS

AHCAB	Animal Health Companies Association of Bangladesh
BFD	Bangladesh Forest Department
BNHS	Bombay Natural History Society
BNVRC	Bangladesh National Vulture Recovery Committee
BVCAP	Bangladesh Vulture Conservation Action Plan
BTB	Bangladesh Television
CGMP	Current Good Manufacturing Practices
CMC	Co-management Committee
DGDA	Directorate General of Drug Administration
DLS	Department of Livestock Services
IEC	Information, Education and Communication
INGO	International Non-Governmental Organization
IUCN	International Union for Conservation of Nature
MoEF	Ministry of Environment and Forests
NGO	Non-Governmental Organization
NSAID	Non-Steroidal Anti-Inflammatory Drug
RSC	Regional Steering Committee
SAVE	Saving Asia's Vultures From Extinction
VCT	Vulture Conservation Team
VSZ	Vulture Safe Zone
WHO	World Health Organization



EXECUTIVE SUMMARY

The largest and highest flying raptors – vultures play an important role in ecology and culture. Out of nine species of vultures in South Asia, Bangladesh possessed seven species viz. White-rumped Vulture (*Gyps bengalensis*), Himalayan Vulture (*Gyps himalayensis*), Griffon Vulture (*Gyps fulvus*), Slender-billed Vulture (*Gyps tenuirostris*), Cinereous Vulture (*Aegypius monachus*), Red-headed Vulture (*Sarcogyps calvus*) and Egyptian Vulture (*Neophron percnopterus*). Bangladesh has already lost one species - Red-headed Vulture (*Sarcogyps calvus*) and White-rumped Vulture (*Gyps bengalensis*) is listed as Critically Endangered by IUCN.

With the catastrophic decline of South Asia's *Gyps* vultures, the population of vultures of Bangladesh is also facing the same situation. It is now scientifically proven that, the intolerance of vultures to some NSAIDs is the primary cause of drastic decline of vultures. For the commitment of conservation of vultures, the Government of Bangladesh has banned the production, distribution and sale of veterinary diclofenac in 2010 and also declared two Vulture Safe Zones (VSZ-1: 19,663.18 km² and VSZ-2: 27,717.26 km²) in 2014. However, the diclofenac is still available at border areas of the country. Recently, other NSAIDs like ketoprofen and flunixin are also toxic to *Gyps* vultures. In addition, habitat loss and food shortage also possesses threat to vultures of Bangladesh.



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The Bangladesh Vulture Conservation Action Plan (BVCAP) is a framework for sustainable conservation of vultures of Bangladesh for next ten years (2016-2025). The vision of this action plan is to ensure a safe environment for vultures in Bangladesh where all kinds of threats will be minimized and where vultures will provide the desired ecological services. Increase the wild population of vultures through removal of veterinary drugs harmful for vultures, habitat protection and improvement, food security, scientific research and monitoring with active participation of communities at all levels are the main objectives of this plan. The four thematic areas of this plan are: 1. Management of Vulture Safe Zones (VSZs); 2. Removal (harmful NSAIDs for vultures) and promotion (safe alternative drugs) of NSAIDs with awareness development among different stakeholders; 3. Conservation breeding of vultures; and 4. Monitoring and research on vultures. These thematic areas consist of programmes which are divided into activities.

Bangladesh Forest Department (BFD) under the Ministry of Environment and Forests is the guardian of forests and its wildlife and the VSZs are also under the jurisdiction of BFD. BFD will implement BVCAP with the assistance of other concerned agencies and Bangladesh National Vulture Recovery Committee (BNVRC) will guide and coordinate the accomplishment of the plan. A ten year budget is also included for the implementation of this plan. The BVCAP is an animated document which is flexible, implementable and responsible. The accomplishment of this plan will be monitored and evaluated with provisions for periodical reporting. This document will be revised and updated every ten years.



1 CONTEXT

The magnificent vultures play a significant role in the ecology of which they are a part of, as well as a key cultural component in human societies across the vulture landscapes. They provide ecosystem services not only by cleaning up carrions of large mammals, but by also minimizing the spread of infectious diseases like anthrax, rabies etc. The White-rumped Vulture (*Gyps bengalensis*) is an iconic species for Bengal, because it has got its scientific name '*bengalensis*' from this region. Out of 23 species of vultures, the South Asian countries have nine species. In Bangladesh there are records of a total of seven species of vulture (Khan, 2012), viz. White-rumped Vulture, Himalayan Vulture (*Gyps himalayensis*), Griffon Vulture (*Gyps fulvus*), Slender-billed Vulture (*Gyps tenuirostris*), Cinereous Vulture (*Aegypius monachus*), Red-headed Vulture (*Sarcogyps calvus*) and Egyptian Vulture (*Neophron percnopterus*). Three are resident and three are either migratory or vagrant and one is considered extinct (Siddiqui *et al.*, 2008).

With the catastrophic decline of South Asia's *Gyps* vultures, the vulture population in Bangladesh has declined drastically. A study reported that in Bangladesh, the White-rumped Vulture population has declined from 1,972 to 816 during the period from 2008 to 2012 (Khan, 2012). A very recent survey conducted during 2014-2015 shows that the number has gone further down to a total population of 260, (SAVE, 2016). Scientists struggled hard to understand the main cause of its decline and many possible threats were considered. Finally, it was scientifically proven that the main reason for this decline is a veterinary drug called diclofenac (a Non-Steroidal Anti-Inflammatory Drug or NSAID), which is widely used in South Asia for the treatment of cattle (Oaks *et al.*, 2004; Shultz *et al.*, 2004). Later on it was also known that other NSAIDs, such as ketoprofen and flunixin are also toxic to *Gyps* vultures (Naidoo *et al.*, 2009, Taggart *et al.*, 2009, Zorrilla *et al.*, 2014).

For the commitment to the protection, conservation and recovery of vulture, the Government has banned the production, distribution and sale of veterinary diclofenac in 2010. Following the decision of 3rd meeting of the Regional Steering Committee (RSC), the Bangladesh National Vulture Recovery Committee (BNVRC) was established by the Ministry of Environment and Forests (MoEF) in 2013 for the guidance and supervision of vulture conservation initiatives in Bangladesh. Two Vulture Safe Zones (VSZ-1:

19,663.18 km² and VSZ-2: 27,717.26 km²) has been declared by the Government of Bangladesh in 2014 under the Wildlife (Conservation and Security) Act, 2012, as specialized 'Landscape zones'. A three tier institutional mechanism (includes RSC, BNVR and VCT) was also approved by the Government for management of these zones. A project entitled 'White-rumped Vulture (*Gyps bengalensis*) Conservation in Bangladesh: Establishment of the Toxic Drug Free Vulture Safe Zones (VSZ) and Monitoring of the Population Trend' developed by the encouragements of the BNVR was awarded to IUCN Bangladesh as a sub-project of the 'Strengthening Regional Co-operation for Wildlife Protection' project of the Bangladesh Forest Department, supported by The World Bank for a period of two years (2014-16). This project in collaboration with Bangladesh Forest Department has already formed six Village VCTs in different areas - Habiganj, Moulvibazar, Khulna, Jessore, Panchagarh district to enhance the vulture conservation at the community level.

After the banning of diclofenac, ketoprofen has taken the place of this harmful drug (Sarowar *et al.*, 2016). Moreover, other threats (habitat destruction and food shortage) remain same for vultures. The increase of breeding success of vulture at Rema-Kalenga Wildlife Sanctuary creates some hopes. To continue the present vulture conservation movement, the need of Bangladesh Vulture Conservation Action Plan (BVCAP) is essential. According to the decision of the 4th meeting of BNVR, IUCN Bangladesh has drafted this action plan. The development and implementation of this action plan will be supported and coordinated by BNVR.

1.1 Status and Trends of Vultures of Bangladesh

Tens of millions of vultures was once present across the Indian sub-continent about twenty years ago (SAVE, 2014). The dramatic decline of vultures were first quantified at Keoladeo National Park, Rajasthan, India and between 1985-1986 and 1996-1997. The population of Oriental White-backed Vulture declined by an estimated 97% at Keoladeo (Prakash, 1999) and in 2000-2001 this colony was extinct (Prakash *et al.*, 2003). In 2000, Bombay Natural History Society (BNHS) teams undertook over 11,000 km of road transect surveys, repeating 6,000 km of road-transects previously surveyed for raptors in the early 1990s, and confirmed that declines of >92% had occurred in all regions across northern India (Prakash *et al.*, 2003). Repeated surveys covering the same route and methodology done in 1992, 2000, 2002, 2003 and 2007 indicated that numbers of Oriental White-backed Vultures had declined by a shocking 99.9% between 1992 and 2007. The equivalent decline in the combined total of *Gyps indicus* and *G. tenuirostris* was 96.8% (Prakash *et al.*, 2007). Populations of Red-headed Vultures and Egyptian Vultures are also declining, at 41% and 35% a year in India (Cuthbert *et al.*, 2006).

The population of White-rumped Vulture and Slender-billed Vulture of Nepal declined 91% and 96% respectively between 1995 and 2011 (Chaudhary *et al.*, 2012). The Populations of Bearded Vulture and Himalayan Griffon Vulture declined by 80% and 70% between 2002-2008 (Acharya *et al.*, 2010) and 2002-2005 (Acharya *et al.*, 2009), respectively. In Pakistan, the vulture mortality led to the extirpation of two colonies (Changa Manga and Dholewala) in 3 years, and a decline of 54.3% in Toawala (Gilbert *et al.*, 2006). Recent studies show that the population decline of vultures across South Asia has slowed after the banning of veterinary diclofenac (Prakash *et al.*, 2012, Galligan *et al.*, 2014).

Nearly 60% population (1,972 to 816) of the White-rumped Vulture of Bangladesh drastically declined in four years (2008-2012) (Khan, 2013). A recent population survey of White-rumped Vulture was carried out in 26 districts (administrative unit) through field survey (22 districts), and interviewing from local people (4 districts) during 2014-2015. A total of 260 individual vultures were recorded in only 12 out of 26 districts (Figure1) (SAVE, 2016). Monitoring of White-rumped Vulture has carried out in Rema-kalenga Wildlife Sanctuary by VCT (Vulture Conservation Team) members from 2014-2016. A total 28 (27 White-rumped Vulture and Slender-billed vulture) and 24 (White-rumped Vulture) nests were observed in 2014-2015 and 2015-2016 respectively. Breeding success rose from 53.57% to 54.17% during the two year study period. The condition of other species of vultures are not good in the country (Table 1).



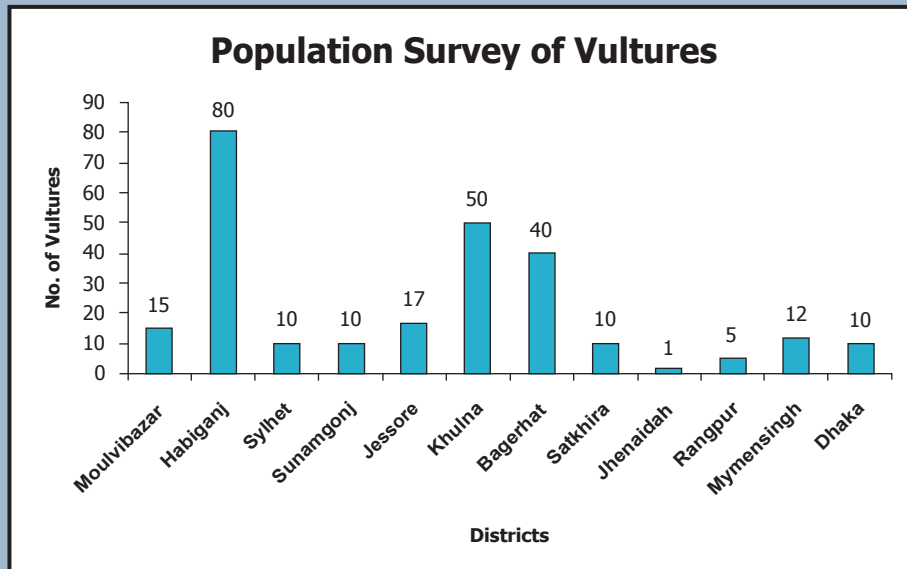


Figure 1. Population survey of White-rumped Vulture in Bangladesh during 2014-2015



Table 1. Status of Vultures in Bangladesh

Sl. No.	English Name	Scientific Name	Global Distribution and Population	National Distribution and Population	IUCN Global Status	National Status (IUCN Bangladesh, 2015)	Current Population Trend
01	White-rumped Vulture, Asian White-backed Vulture, White-backed Vulture, Oriental White-backed Vulture	<i>Gyps bengalensis</i> (Gmelin, 1788)	Bangladesh, Nepal, Bhutan, Pakistan, India, Myanmar, Thailand, Laos, Cambodia and southern Vietnam Population: 3,500-15,000 mature individuals	Sylhet and Khulna Division Population: 260	Critically Endangered (CR)	Critically Endangered (CR)	Global and National: Decreasing
02	Himalayan Griffon Vulture, Himalayan Griffon, Himalayan Vulture	<i>Gyps himalayensis</i> (Hume, 1869)	Afghanistan, Bangladesh, Bhutan, China, India, Kazakhstan, Kyrgyzstan, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Tajikistan, Thailand, Uzbekistan Population: 66,000-334,000 mature individuals.	Northeast and northwest region of the country Population: 110	Critically Endangered (CR)	Least Concern (LC)	Global: Stable National: Decreasing
03	Slender-billed Vulture, Long-billed Vulture, Indian Long-billed Vulture, Indian Griffon	<i>Gyps tenuirostris</i> (Gray, 1844)	Bangladesh, Cambodia, India, Lao People's Democratic Republic, Myanmar, Nepal Population: 1,500-3,750 mature individuals	Northeast, central and southeast part of the country. One recent record from Rema-Kalenga Wildlife Sanctuary. Population: 2 (One Nest)	Critically Endangered (CR)	Data Deficient (DD)	Global and National: Decreasing

04	Cinereous Vulture, Eurasian Black Vulture, Black Vulture, Monk Vulture	<i>Aegypius monachus</i> (Linnaeus, 1766)	Huge range extends from southern Europe and North Africa through the mountains of the Middle East and Asia. Population: 15,600-21,000 mature individuals	Northeast, northwest, central and southwest region of the country. Population: Unknown (Seven individuals were found in northeast part of the country).	Near Threatened (NT)	Near Threatened (NT)	Global and National: Decreasing
05	Egyptian Vulture	<i>Neophron percnopterus</i> (Linnaeus, 1758)	Global range extends through Europe, Africa, the Middle East and Central and South Asia. Population: 12,000-38,000 mature individuals	There are two recent records from Kaptai and cultivated land in Rajshahi Division. Possibly, it has not been sighted from the country after 1960, excepting two recent sightings. Population: Unknown	Data Deficient (DD)	Endangered (EN)	Global: Decreasing National: Unknown
06	Griffon Vulture, Eurasian Griffon, Eurasian Griffon Vulture	<i>Gyps fulvus</i> (Hablizl, 1783)	Global range extends through Europe, Africa, the Middle East and Central and South Asia. Population: 80,000-120,000 mature individuals	Two vultures were seen in northern part of the country in 2014-15. Population: Unknown.	Not Assessed	Least Concern (LC)	Global: Decreasing National: Unknown
07	Red-headed Vulture, Indian Black Vulture, Pondicherry Vulture	<i>Sarcogyps calvus</i> (Scopoli, 1786)	Cambodia, China, India, Lao People's Democratic Republic, Myanmar, Nepal, Thailand, Viet Nam Population: 3,500-15,000 mature individuals	Population: Extinct	Regionally Extinct (RE)	Critically Endangered (CR)	Global: Decreasing National:-

Source: BirdLife International 2016, IUCN Bangladesh 2015



1.2 Socio-economic, Ecological and Cultural Importance of Vultures

Vultures can be regarded as a natural resource for providing society with a number of services most notably the disposal of carrion, especially livestock carcasses. These services have an impact on human health, economic activity and on environmental quality (Markandya *et al.*, 2008) because they do not only clean carcasses but also minimize the spreading of diseases like anthrax, rabies etc.

Socio-economic importance

The people of Bangladesh are not hostile to vultures and unaware the threats of their decline (Khan, 2012). This majestic species possesses not only social but also economical value. With the sharp decline of vulture in India, led to a crisis of carcass disposal and forced the government to put in carcass rendering plants in several places. The scientists found that the present investment required in carcass disposal services for the next 50 years in rural areas is estimated to be around USD 5.50 million. It is therefore economically more viable to invest in the breeding and re-introduction of vultures, and maintenance of VSZs instead of investing in carcass disposal plants. The steepest fall of vulture population result in an increase of dog population

(Prakash *et al.*, 2003) and over 95% of human deaths in India due to rabies are due to dog bites (Kale *et al.*, 2006). The costs from dog bites range from Rs. 998 billion to Rs. 1095 billion in the period of 1993 to 2006 (Markandya *et al.*, 2008).

Ecological importance

Vultures are able to detoxify the bacterial matter of the carcasses and decomposing bodies due to low pH in stomach which kills bacteria and as well as the most resistant spores (Houston and Cooper, 1975). They also kill the bacteria attach on their legs during feeding the carcass by urination (Llyas, 2014). This scavenger bird removes the carcasses rapidly and efficiently and thus keeping the environment clean and protects human, livestock and wildlife from infectious disease (Markandya *et al.*, 2008). So, they are considered as 'Natural Cleaner' (Khan, 2012).

Vultures are the only obligate vertebrate scavengers that experienced the most rapid decline in conservation status of any other birds group over the past decades (Buechely and Sekercioglu, 2016). Due to rapid decline of vultures, an increase in uneaten livestock carcasses poses a direct threat to human health because the carrions provide a breeding ground for potentially pathogenic bacteria leading to the possibility of direct or indirect infections and are sources of disease, such as anthrax (George *et al.*, 1994; John, 1996 and Vijaikumar *et al.*, 2002).

Due to the absence of vultures other secondary scavengers (dogs, jackals, hyenas, crows, eagles etc) continue to play a role as primary scavengers which causes ecological imbalance affecting different species including human. The continuous reduction of vultures led to a continuous increase of feral dog population (in 1990's the dog population was 18 million which increased at 29 million in 2004) in India (Markandya *et al.*, 2008 and Naidoo, 2007). This country has the highest rate of human rabies infections in the world and dog bites are the main source (APCRI, 2004).

Not only human vultures also helped controlling of livestock diseases such as brucellosis, tuberculosis and anthrax by disposing of infected carcasses (Swan *et al.*, 2006b). The loss of vultures contribute to the environmental pollution (air, soil and water) resulting in an increased incidence of infectious diseases (Markandya *et al.*, 2008).

Cultural importance

Vultures have made their presence in different civilizations from prehistoric age to modern time. Vultures are the part of the heritage of Bengal region since it acquired its scientific name 'bengalensis' from this region (Khan, 2012).

Ancient Egyptians considered vultures as wonderful mother because of protective and nurturing behavior to their young. Nekhbet (known as *Mother of*



Mothers), a local goddess of childbirth and feminine energies, is usually illustrated as an Egyptian vulture in Egyptian mythology. Tibetan Buddhists, Zoroastrians offered their dead up to the vultures upon a raised platform known as a *dakhma*. They believe that, vultures will help release the soul from one's body. This practice is named as 'Sky Burial' operational in the Chinese provinces and autonomous regions of Tibet, Qinghai, Sichuan, Mongolia, Bhutan, Nepal, and India.

The vulture is the avenger of nature spirits in Greek mythology. The Mayan believed vultures' regulated rain. Some Native Americans interpreted their flight patterns as a way to assess and predict the weather. In Hindu myths, vultures are the carrier of God Shani (Saturn). In Ramayan (Hindu Scripture), the vulture King-Jatayu tries to protect Sita from the evil Ravena in the fight of good against evil. In some Native American tribes, vultures are deemed unclean and symbols of death. This misconception is perpetuated by the popular press, television and cinematography (Naidoo, 2007).

1.3 Assessment of Threats

NSAIDs

Diclofenac, the 'vulture killer', is the main factor of vulture downfall across Asia, is used as a veterinary NSAID (Non-steroidal anti-inflammatory drug) to treat livestock. All species of *Gyps* vultures tested by diclofenac found highly sensitive to this drug (Oaks *et al.*, 2004, Swan *et al.*, 2006a)

and Das *et al.*, 2010). All vulture range states in Indian Subcontinent have banned the veterinary use of diclofenac (Bangladesh in 2010 and Nepal, India, Pakistan in 2006). Ketoprofen - another NSAID, possesses great threat to vultures like Cape Griffon Vulture (*Gyps coprotheres*) and African White-backed vulture (*Gyps africanas*) at doses that birds could encounter in the wild if they fed upon carcasses of cattle that died within hours of treatment (Naidoo *et al.*, 2009). Aceclofenac and Flunixin also act as threat for vulture survival (Sharma, 2012 and Zorrilla *et al.*, 2014). On the other hand, meloxicam is a safe alternative for diclofenac (Swan *et al.*, 2006b). This drug is widely used in Nepal, India, Europe and North America as a veterinary drug (Swan *et al.*, 2006b).

A sample market survey carried out in three tiers - undercover, open and undercover during 2014-15 compared the availability of veterinary drugs in different times. At first phase, 24%, 40% and 24% drugs of diclofenac, ketoprofen and meloxicam found in 235 surveyed stores respectively. During this survey, among the total number of found diclofenac drug, 50% are Indian (SAVE, 2015 and 2016). After the declaration of VSZs, the second undercover pharmacy survey was carried out in nine and twelve districts of these two zones. No diclofenac was found in VSZ-1 but 7% diclofenac was found in the border areas of VSZ-2, 56% ketoprofen and 19% meloxicam found in second undercover survey showed the increase use of harmful drug ketoprofen (Sarowar *et al.*, 2016), (Figure 2).

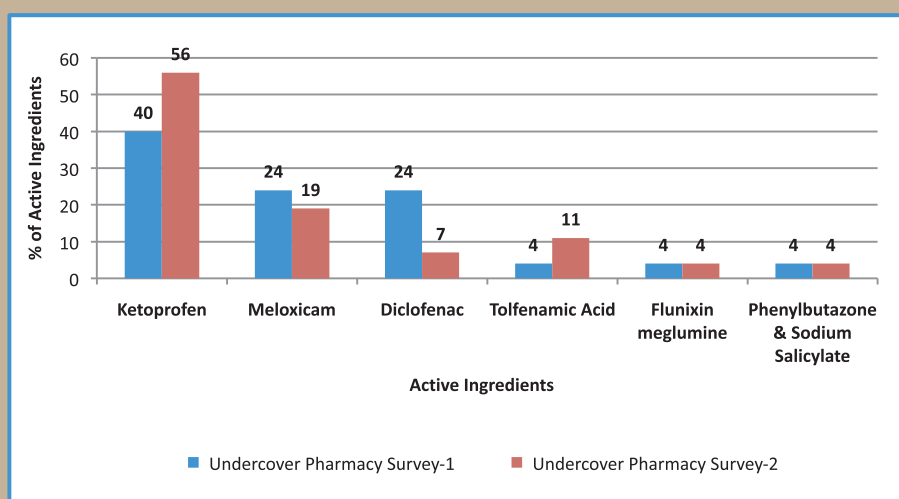


Figure 2. Undercover pharmacy survey (1st & 2nd) showing percentage of active ingredients of veterinary drugs



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Habitat destruction

Large trees suitable for vulture nesting are rare in some areas of Bangladesh (Khan, 2012). The scarcity of nesting trees in Sundarbans was also reported (Sarker, 1987). Moreover, it is difficult to ensure the protection of large vulture nesting trees in private properties (Khan, 2012).

Food scarcity

The dead cattle are often buried or used as food in shrimp farms causing food shortages of vulture and contributing to their decline (Khan, 2012). Moreover, very little amount of carcass of wild mammals are available to the vultures of the country (Sarker, 1987).

Lack of awareness and understanding

The people of Bangladesh are not hostile to vultures but they are totally unaware of the threats and dreadful situation of vultures of the country. The manufacturers of harmful veterinary drugs for vulture argued about the reasons of vulture declining (Khan, 2012).

1.4 Conservation Efforts and Achievements

Ban of harmful drug for vulture, 2010

The Government of Bangladesh is committed to the protection, conservation and recovery of the vulture population. For conservation response, the Government has banned the production, distribution and sale of veterinary diclofenac from 25 October 2010.

Formation of BNVRC, 2013

In response to regional conservation of vulture, the Regional Steering Committee (RSC) was established according to the decision of Regional Declaration on the conservation of South Asia's Critically Endangered Vulture Species in New Delhi on 4 May 2012. This umbrella body guides and supervises vulture conservation and recovery initiatives in Bangladesh, India, Nepal and Pakistan.

On 25 July 2013, the Bangladesh National Vulture Recovery Committee (BNVRC) was established by the Ministry of Environment and Forests (MoEF) following the decision of the 3rd meeting of the Regional Steering Committee (RSC). This Committee will support and coordinate the development and implementation of Bangladesh Vulture Conservation Action Plan (BVCAP) along with other activities (Annex I).

Projects for vulture conservation: The first project for vulture conservation in Bangladesh was "White-rumped Vulture (*Gyps bengalensis*) in Bangladesh: Population, Breeding and Threats" which implemented from 2008-2012. This project assessed the trends and threats of White-rumped vulture in the country. Then another small scale project entitled "Save habitat, save vulture" continued for one year starting in 2012. Later on, a project for vulture conservation of Bangladesh was developed by the encouragements of the BNVRC, which was entitled 'White-rumped Vulture (*Gyps bengalensis*) Conservation in Bangladesh: Establishment of the Toxic Drug Free Vulture Safe Zones (VSZ) and Monitoring of the Population Trend'. This was awarded to IUCN Bangladesh as a sub-project of the 'Strengthening Regional Co-operation for Wildlife Protection' project of Bangladesh Forest Department, supported by The World Bank. This project has supported the following achievements:

- Identification, mapping and declaration of two Vulture Safe Zones (VSZs) in the country,
- Formation of Vulture Conservation Team (VCT) and government approval for their sustainability,

- Creation of awareness on harmful drugs (diclofenac and ketoprofen) and safe drugs (meloxicam) for vulture,
- Drafting of Bangladesh Vulture Conservation Action Plan,
- Establishment of Vulture Feeding Station,
- Set-up of community based vulture nest monitoring programme.

Establishment of Vulture Safe Zones, 2014: The government of Bangladesh has declared two Vulture Safe Zones (VSZ-1: 19,663.18 km² and VSZ-2: 27717.26 km²) on 23 December, 2014 under the Wildlife (Conservation and Security) Act, 2012, as specialized 'Landscape zones'. These are the only government declared safe zones in the world and share boundary with India (Map 1), (Annex II).

Formation and legalization of Vulture Conservation Team (VCT), 2015

For the management of VSZs Bangladesh government has already approved a three tiers (Village-VCT, Upazilla-VCT and District-VCT) institutional mechanism which includes already formed RSC, BNVRC and local level conservation team named as Vulture Conservation Team (VCT) (Figure 3), (Annex III). Vulture Conservation Team is a team which consists of different stakeholder such as Bangladesh Forest Department, Livestock Department, Drugs Administration, Local Administration, cattle owner, farmer, drug representatives etc. White-rumped Vulture (*Gyps bengalensis*) Conservation Project in Bangladesh in collaboration with Bangladesh Forest Department has already formed six Village VCTs in different areas - Habiganj, Moulvibazar, Khulna, Jessore, Panchagarh districts to enhance the vulture conservation at the community level. All the members of VCT (no.=71) have been trained for nest monitoring, data collection, compilation and reporting mechanism through Vulture Monitoring Manual (Sarowar *et al.*, 2015). The major activities performed by Village-VCT involves monitoring and protection of vulture nesting trees, rescue of vultures, safe food supply to vultures and sensitization of local people about the use of veterinary drugs highlighting the harmful effects of diclofenac to vulture and environment (SAVE, 2016). Several activities like research, awareness programmes, meetings, workshops etc. were conducted with the help of Vulture Conservation Team (VCT).



Map 1. Government declared Vulture Safe Zones of Bangladesh

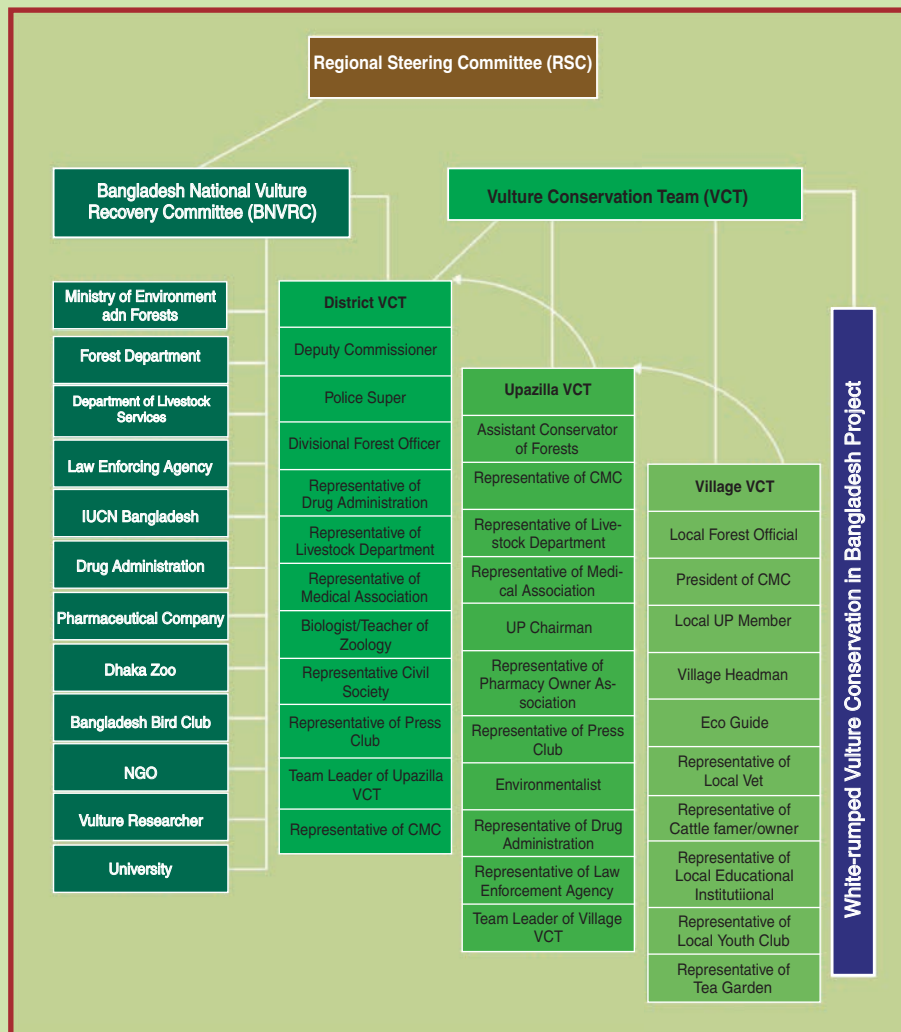


Figure 3. Government approved institutional setup for vulture conservation in Bangladesh

Research: In the VSZs area population survey of vulture, pharmacy survey of veterinary drugs and nest monitoring survey of vultures were carried out.

Marking, monitoring, protection of vulture nesting trees and plantation programme: A total 195 vulture nesting, roosting trees of Rema-Kalenga Wildlife Sanctuary were identified, marked and mapped for protection from disturbance. Nest monitoring of vulture is a regular activity carried out by the Village-VCT members at Rema-kalenga Wildlife Sanctuary in Vulture Safe Zone-1. Two VCT members visit vulture hotspots area at every 4 days of a week. Moreover, to protect the breeding ground of vultures at Rema-kalenga Wildlife Sanctuary, the local Forest Department made 500 running feet fence. For ensuring enough nesting and roosting trees for vulture, a number of schools present at VSZ received the saplings of *Dipterocarpus* sp. and *Bombax* sp (SAVE, 2016).

Ensuring safe food for vulture: For ensuring safe food for vulture several cows were provided by Village Vulture Conservation Team at specific vulture feeding sites since February 2015 to present. Before providing the dead cattle carcass, the VCT assured that the cattle carcasses were safe. They owners of the dead cattle assured that the cattle were not treated with any non-steroidal anti-inflammatory drugs (NSAIDs) in last one year. The consultation with veterinary doctor who treated the cattle during illness also assured that the cattle carcasses were safe for vulture because the cattle was not administered by any non-steroidal anti-inflammatory drugs for its treatment (SAVE, 2016).



Rescue of vulture and monitoring of causes of death: A total 44 vulture (38 Himalayan Griffon and 6 White-rumped Vulture) were rescued from different places of the country of which one Himalayan Griffon and all White-rumped Vultures were found dead. Among the rescued vultures, two were ringed and released, four were kept in the custody of Rajshahi Wildlife Management and Nature Conservation Division of Bangladesh Forest Department and others were shifted to Bangabandhu Safari Park at Gazipur. The postmortem of one dead vulture (Himalayan Griffon Vulture) was carried out by Sylhet Agriculture University but NSAID contamination was not found (SAVE, 2016).

Awareness creation programmes: Several awareness creation programmes, school education programmes, promotion of safe drug, meloxicam and day celebrations occurred at different areas of VSZs. Different level of stakeholders (livestock officer, veterinary doctors, cattle owner, cattle trader, local veterinary physician, pharmacy owner, local people etc) and school students were made aware about the anti-vulture sentiment, causes of sudden crash of vulture population, establishment of VSZs in Bangladesh, formation of VCTs through presentation, video documentary and awareness materials distribution (SAVE, 2016).

Collaboration with pharmaceutical companies: Reduction of harmful drugs use around the Vulture Safe Zone is one of the important needs of vulture conservation. In this regard, initiatives were taken to aware the drug companies about the present situation of drug use for veterinary purpose. Two



meetings with two prominent drug companies of Bangladesh (ACME Laboratories Limited and RENATA Limited) were contacted and both companies have shown huge eagerness for vulture conservation initiatives. ACME published a label with a slogan on the drug packaging to raise awareness and promote more extensive use of meloxicam. The translation of the slogan is “*Vultures play an important part in maintaining the balance of the environment. The use of Meloxicam in domestic animals is safe for the Vultures.*” RENATA interested to promote meloxicam. Moreover, the company wants to support to the new feeding station of vultures. Both the companies are eager to participate in vulture related awareness programmes (SAVE, 2016).

Meetings and workshops: Several meetings and workshops were arranged at national, local and international level about the present vulture conservation initiatives in Bangladesh with the collaboration of different agencies such as BNVRC, BFD, DGDA, DLS, different universities, national and international NGOs. Moreover, the bimonthly meeting of Village-Vulture Conservation Team carried out at VSZs area in a regular manner to assess their activities and drawbacks (SAVE, 2016).

Conservation breeding of vultures: There are 39 vultures present in different zoos and safari parks of Bangladesh. Moreover, rescued vultures were shifted to Vulture Rehabilitation Center of Bangabandhu Safari Park, Gazipur. No large scale breeding programme is underway, only small scale where it is feasible in Bangabandhu Safari Park and Dhaka Zoo (SAVE, 2016).



1.5 Review of National Legislations

Bangladesh Wildlife (Preservation) (Amendment) Act, 1974

Vultures are placed in the Schedule III as protected animals, i.e., animals which shall not be hunted, killed or captured.

Wildlife (Conservation and Security) Act, 2012

"Landscape zone" means a public or private area outside the boundaries of designated sanctuary, national park and ecopark that regulates the biodiversity of the protected area and which is managed to maintain similar landscape of the protected area for deterring degradation of the protected area and where safe movement of wild animals is ensured and which is declared as landscape zone under section 20.

Prohibition related to wild animals and plants - (1) No person shall hunt any wild animal without a license or, as the case may be, obtaining a permit under this Act, or willfully pick, uproot, destroy or collect any plant mentioned in Schedule IV.

(2) The Government may, by notification in the official Gazette, prohibit hunting of any specified or all wild animals in a specific forest area or throughout Bangladesh for a specific period.

Declaration of landscape zone or corridor, buffer zone and core zone. -

(1) The Government may, after receiving consensus of local community, by notification in the official Gazette, declare any public or private area outside the boundaries of protected or reserved forests but adjacent to any declared area as a landscape zone or corridor for the movement of wild animals or for the purpose of special development or abate or control any sorts of damage of such area.

Penalties for killing birds or migratory birds, etc. - (1) If any person kills any birds or migratory birds mentioned in schedule I and II, he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 1 (one) year or with a fine of Taka not exceeding 1 (one) lac or with both, and in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 2 (two) years or with a fine of Taka not exceeding 2 (two) lac or with both.

(2) If any person collects, acquires or purchases or sells or transports any trophy, uncured trophy, meat, parts of body of birds or migratory birds mentioned in schedule I and II, he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 6 (six) months or with a fine of Taka not exceeding 30 (thirty) thousand or with both, and in case of his repetition of the same offence, he

shall be punished with imprisonment for a term not exceeding 1 (one) year or with a fine of Taka not exceeding 50 (fifty) thousand or with both.

The seven species of vultures are reserved in Schedule I (Sl. No. 250-256) under this Act.

National Biodiversity Strategy & Action Plan for Bangladesh, 2006

Strategy 1: Recognize the value and importance of biodiversity for the Bangladesh people and document properly its components, distribution and value.

Document existing ecosystem, species and genetic diversity of the country, including their status, occurrence and abundance.

Promotion and enhancement of dynamic system of ex-situ and in-situ biodiversity conservation and establish national gene bank and natural history museum.

Strategy 2: Conserve ecosystems, species and genetic pool of the country to ensure that the present and future wellbeing of the country and its people are secure

Strengthen biological management and control of pests and ban on use of all kinds of harmful chemicals and biocides.

Develop action plans for protection and conservation of endangered native and endemic species of Bangladesh.

Develop management and action plans for key ecosystems and landscapes following the bio-ecological zones of Bangladesh.

Develop model 'eco-villages' for biodiversity conservation involving village level local government institutions and communities.

Strategy 3: Restore ecosystems and rehabilitate endangered species

Support rehabilitation of the rare, threatened and endangered native, wild and domesticated species.

Implement plans for management of species under the rare, threatened and endangered categories.

Support development of assessment, management and monitoring plans both at ecosystem and species levels.

Strategy 6: Contribute to raising awareness and building capacity of biodiversity conservation among the different sectors of the society

Promotion of capacity of stakeholders for biodiversity conservation through environmental education and awareness programme.

Build capacity of local communities to monitor and report on the status of biodiversity, threats, and underlying causes.

Strategy 9: Enhance Protected Area management, recognizing the benefits of collaboration with local communities in their management (co-management).

Develop action plans to promote co-management of Protected Areas and biodiversity hotspots in different ecosystems including wetland, forests through local government and community initiative.

Identify, create and manage National Biodiversity Conservation Areas, Protected Areas (PAs) and biodiversity hot spots and suggest appropriate actions to promote environmental sustainability.

National Drug Policy, 2005

Drug registration - All drugs and medicine and other medical substances in finished dosage forms, which are manufactured, imported, distributed, marketed or consumed in the country must be registered with the Drug Regulatory Authority (DRA) of the country in the specific dosage form and strength as recommended by the Drug Control Committee (DCC).

Quality, safety, efficacy and usefulness should always be the predetermining criteria for approval for sale of a pharmaceutical product.

Drug production - One of the main objectives of the NDP (National Drug Policy) is to produce good quality drugs in the country. The current Good Manufacturing Practice (CGMP) guideline of WHO (World Health Organization) should thus be strictly followed in the manufacture of the drugs in the country. In order to ensure strict compliance with the requirements of CGMP (Current Good Manufacturing Practices), all drug production units should be to regular inspection by the Inspectors of the Directorate General of Drug Administration. The manufactures will also be expected to conduct periodic internal CGMP audit following the standard check-list of the Directorate General of Drug Administration.

Drug distribution, sale and storage - No drugs or medicine, other than non-prescription drugs, should be sold or dispensed without prescriptions.

Maintenance of quality and safety of drugs in retail and in storage should be ensured by carrying out regular checks by Inspectors of drugs on the quality of stored drugs at all levels.

Quality assurance of drugs and pharmaceuticals - Quality of marketed drugs should be ensured by frequent post-marketing surveillance by the Drug Inspectors and testing random samples of the marketed drugs in the quality control laboratories.

Drug Information and Monitoring -The Directorate General of Drug Administration should have a well-equipped Drug monitoring and information unit.

Monitoring and reporting of adverse drug reactions (ADR) should be seriously done to ensure safe and rational use of drugs in the country.

The Drugs (Control) Ordinance, 1982

Penalty for manufacture, etc., of certain drugs.- Whoever manufactures, imports, distributes or sells—

- (a) any medicine which is not registered under this ordinance, or
- (b) any medicine in contravention of the provisions of section 8, or
- (c) any drug which is adulterated or spurious.

Shall be punishable with rigorous imprisonment for a term which may extend to ten years, or with fine which may extend to two lac taka, or with both, and any implements used in the manufacture or sale of such medicine or drug may, by order of the Drug Court, be forfeited to the Government.



2 ACTION PLAN



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2.1 Vision

A safe environment for vultures in Bangladesh where all kinds of threats will be minimized, and vultures will provide the ecological services.

2.2 Objective

Increase the wild population of vultures through removal of harmful veterinary drugs, habitat protection and improvement of food security, research and monitoring with active participation of communities at all levels.

2.3 Thematic Areas

1. Management of Vulture Safe Zones (VSZs)
2. Removal (harmful NSAIDs for vultures) and promotion (safe alternative drugs) of NSAIDs with awareness development among different stakeholders
3. Conservation breeding of vultures
4. Monitoring and research on vultures



Bangladesh Vulture Conservation Action Plan

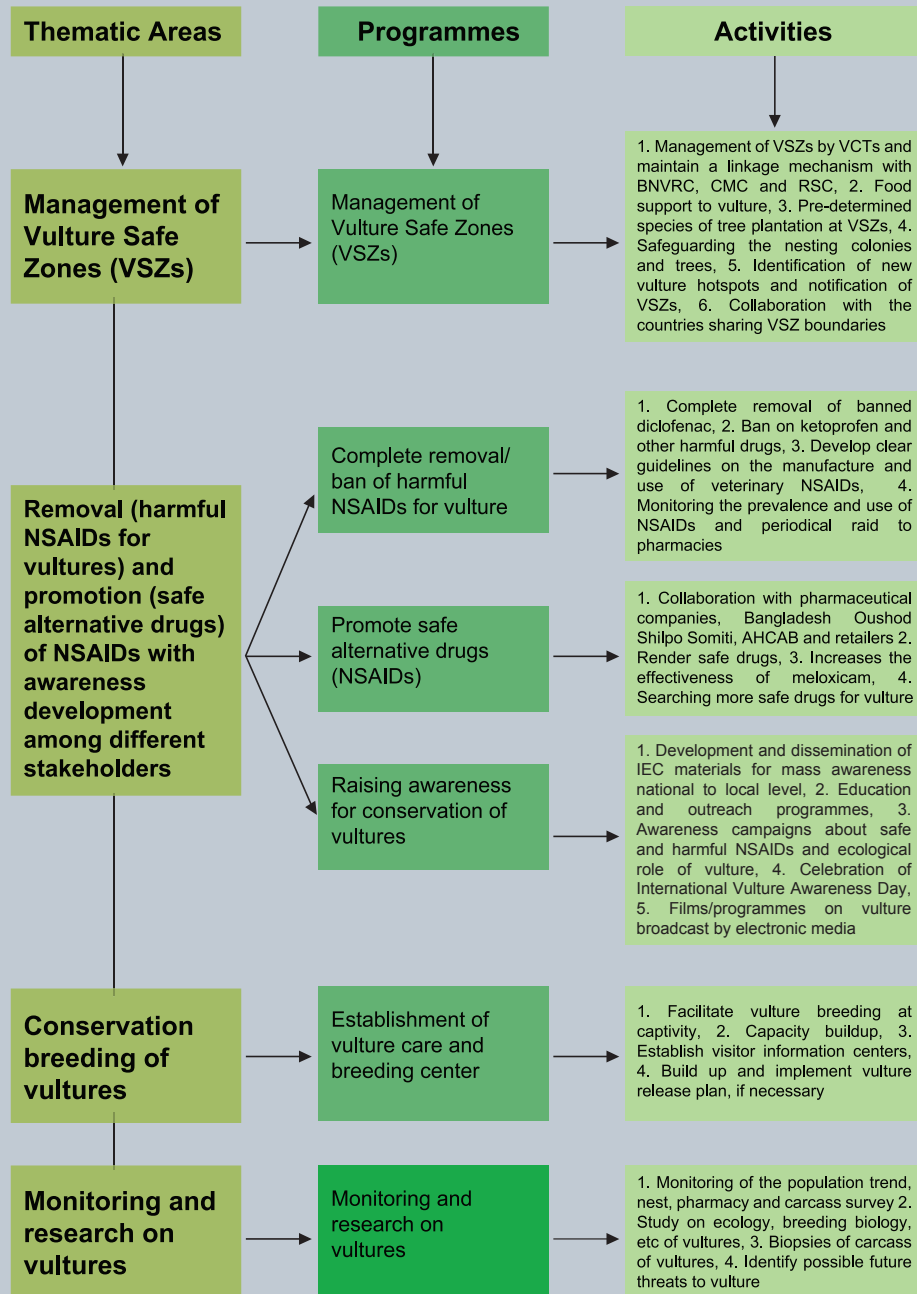


Figure 4. Schematic diagram of Bangladesh Vulture Conservation Action Plan 2016-2025.



2.4 Thematic Areas, Programmes and Activities

Si. No.	Activities	Responsible Body	Timeframe*	Verifiable Indicators	Estimated Cost (BDT)
Thematic Area 1	Management of Vulture Safe Zones (VSZs)			- Increased wild populations of vulture - Increased use of safe drugs - Number of trans-boundary initiatives implemented	52,500,000
Programme 1	Management of Vulture Safe Zones (VSZs)				
Activity 1	Management of VSZs by VCTs and maintain a linkage mechanism with BNVRC, CMC and RSC ¹	BNVRC, RSC, BFD, VCT	Long term	- Number of VCTs included in Forest Department's conservation initiatives - Number of meetings organized by VCTs - Number of decisions implemented	20,000,000
Activity 2	Food support to vulture (especially during breeding period, if necessary) ²	VCT, BFD, DLS	Long term	- Number of times food provided - Certificates of veterinary doctors	12,000,000
Activity 3	Pre-determined species of trees plantation at VSZs (mainly hotspot areas) ³	VCT, BFD	Short term	Number of trees planted and sustained	4,000,000

¹ For successful management of VSZs, VCTs will be formalized at different tiers and linked with BNVRC, CMC and RSC.

² Food support programmes will only carry out during breeding period of vultures (late September-late March).

³ Plantation incorporated the species suitable for vulture nesting and roosting.

Sl. No.	Activities	Responsible Body	Timeframe*	Verifiable Indicators	Estimated Cost (BDT)
Activity 4	Safeguarding the nesting colonies and trees (marked vulture trees and others) ⁴	VCT, BFD, local communities, stakeholders	Long term	Identification and protection of colonies and trees	5,000,000
Activity 5	Identification of new vulture hotspots and notification of VSZs ⁵	MoEF, BFD	Medium to Long term	Number of identified vulture colonies	1,500,000
Activity 6	Collaboration with the countries sharing VSZ boundaries through exposure visits, meetings, researches and by any other means ⁶	RSC, BNVRC, BFD	Long term	- Number of visits - Number of meetings/events - Number of research initiatives - Number of regulations implemented	10,000,000
Thematic Area 2	Removal (harmful NSAIDs for vultures) and promotion (safe alternative drugs) of NSAIDs with awareness development among different stakeholders			0% availability of diclofenac for veterinary use - Ketoprofen and other harmful drugs banned - Number of implemented resolutions	48,300,000
Programme 1	Complete removal/ ban of harmful NSAIDs for vulture				
Activity 1	Complete removal of banned diclofenac ⁷	MoEF, BNVRC, BFD, DLS	Short term	0% availability of diclofenac for veterinary use	1,200,000
Activity 2	Ban on ketoprofen and other harmful drugs ⁸	MoEF, BNVRC, BFD, DLS, Universities	Short term and immediate	Ketoprofen and other harmful drugs banned	500,000

4 Cutting down nesting trees and disturbances near vulture colonies will be strictly prohibited, in both Government and private lands. Incentives/recognitions will be ensured to protect the old trees.

5 Identification of new vulture hotspots, through population survey, which will be the centre of VSZ – an area included 100 km radius. Then VSZ will be mapped. Meetings will be arranged for the feedback of different stakeholders. VSZs will be legalized through a national final discussion. Then VSZs will be notified in a gazette by MoEF.

6 Trans-boundary cooperatives will ensure safety of vultures into 100 km radius area.

7 Pharmacy survey data will show the percentage of removal of diclofenac.

Si. No.	Activities	Responsible Body	Timeframe*	Verifiable Indicators	Estimated Cost (BDT)
Activity 3	Develop clear guidelines on the manufacture and use of veterinary NSAIDs ⁹	DGDA, DLS, Pharmaceutical companies, AHCAB	Short term	A comprehensible guideline for production and use of veterinary NSAIDs that is not harmful for vulture	500,000
Activity 4	Monitoring the prevalence and use of harmful NSAIDs and periodical raid to pharmacies	BFD (Wildlife Crime Control Unit), law enforcement agencies	Long term	Number of raids	1,000,000
Programme 2 Promote safe alternative drugs (NSAIDs)					
Activity 1	Collaboration with pharmaceutical companies, Bangladesh Oushod Shilpo Somiti, AHCAB and retailers as well ¹⁰	BFD, BNVRC	Short term and immediate	- Number of meetings - Number of resolutions implemented	100,000
Activity 2	Render safe drugs	BFD, Pharmaceutical	Short term and immediate	Number of drugs rendered	6,000,000
Activity 3	Increases the effectiveness of meloxicam ¹¹	Bangladesh Oushod Shilpo Somiti, pharmaceutical companies	Medium term	Number of companies produce effective meloxicam	1,500,000
Activity 4	Searching more safe drugs for vulture ¹²	Research institutes, universities, pharmaceutical companies, local govt.	Long term	Number of Safe drugs invented	1,500,000

⁸ After the ban of diclofenac, ketoprofen replaced it. MoEF/ BNVRC will take the lead role to the banning process.

⁹ DGDA and DLS along with pharmaceutical companies will develop a comprehensible guideline for production and use of safe veterinary NSAIDs for treatment of livestock.

¹⁰ Advocate the pharmaceutical companies to produce safe drugs instead of harmful drugs for vulture.

¹¹ More effective formulation of meloxicam can be collected from international organizations.

Si. No.	Activities	Responsible Body	Timeframe*	Verifiable Indicators	Estimated Cost (BDT)
Programme 3	Raising of awareness for conservation of vultures				
Activity 1	Development and dissemination of IEC (information, education and communication) materials for mass awareness national to local level ¹³	BFD, DGDA, DLS, Local government, public media	Long term	- Number of IEC materials developed - Number of materials disseminated	4,000,000
Activity 2	Education and outreach programmes ¹⁴	BFD, DLS, NGOs, CMC, Universities, Local govt.	Short term and immediate to long term	- Number of programmes - Surveys	12,000,000
Activity 3	Awareness campaign about safe and harmful NSAIDs and ecological role of vulture	BFD, DLS, Pharmaceutical Companies, local govt.	Long term	- Number of campaigns - Surveys	10,000,000
Activity 4	Celebration of International Vulture Awareness Day ¹⁵	BFD, DLS, Zoological Society of Bangladesh, NGO/Activities	Long term	Number of Day celebration programmes	5,000,000
Activity 5	Film/programme on vulture broadcasts by electronic media	BTV, Bangladesh Betar, community radio, private TV channels & radios	Short term and immediate to long term	- Number of times broadcasted - Number of channels broadcasted	5,000,000

¹² Looking for diverse options through research.

¹³ People need more knowledge on the reasons of cattle death and relationship with the devastation of vulture population. This could be possible through the IEC materials.

¹⁴ Quacks need special training on their misconception on the effect of meloxicam on pregnant cattle. Educational institutions should take responsibility to aware the students.

¹⁵ Awareness day will be celebrated on first Saturday of September each year.

Si. No.	Activities	Responsible Body	Timeframe*	Verifiable Indicators	Estimated Cost (BDT)
Thematic Area 3	Conservation breeding of vultures			▪ Number of captive breeding centers established ▪ Number of vulture successfully breed in captivity ▪ Number of vultures released	4,600,000
Programme 1	Establishment of vulture care and breeding center				
Activity 1	Facilitate vulture breeding at captivity	BFD, Bangladesh National Zoo, All zoos, Bangabandhu Sheikh Mujib Safari Park (Gazipur), and Bangabandhu Sheikh Mujib Safari Park (Dulahazara)	Long term	▪ Number of captive breeding centers established ▪ Number of vultures successfully bred in captivity ▪ Number of sick/injured vultures treated	1,500,000
Activity 2	Capacity buildup ¹⁶	BFD, DLS, zoos, safari parks, research organizations, universities	Medium term	▪ Number of trained people	1,500,000
Activity 3	Establish visitor information centers ¹⁷	BFD, Bangladesh National Zoo, Bangabandhu Sheikh Mujib Safari Park (Gazipur), and Bangabandhu Sheikh Mujib Safari Park (Dulahazara)	Short term and immediate	▪ Number of established visitor information centers	1,500,000

¹⁶ Officials and associates of responsible bodies should be trained up regarding this issue.

¹⁷ This should be initiated in zoos, and then the parks that have vultures in captivity.

Si. No.	Activities	Responsible Body	Timeframe*	Verifiable Indicators	Estimated Cost (BDT)
Activity 4	Build up and implement vulture release plan, if necessary	BFD	Long term	▪ Number of treated vultures released	100,000
Thematic Area 4	Monitoring and Research on Vultures			▪ Assessment of trend of vulture population ▪ Scientific study on different aspects of vulture ▪ Comparative study on veterinary NSAIDs ▪ Information on carcass availability and management ▪ Number of vultures post-mortem	16,500,000
Programme 1	Monitoring and Research on Vultures				
Activity 1	Monitoring of the population trend, nest, pharmacy and carcass survey ¹⁸	VCT, BFD (Wildlife Center), universities, researchers, etc	Long term	▪ Assessment of trend of vulture population ▪ Comparative study on veterinary NSAIDs ▪ Information on carcass availability and management	10,000,000
Activity 2	Study on ecology, breeding biology, etc. of vultures	Universities, BFD (Wildlife Center), researchers, etc.	Long term	▪ Scientific study on different aspects of vulture ▪ Report & Papers	5,000,000
Activity 3	Biopsies of carcass of vultures	Universities, BFD (Forensic Labs, Wildlife Center), Local vets	Long term	▪ Number of biopsies ▪ Report & Papers	1,000,000
Activity 4	Identify possible future threats to vulture	Universities, BFD (Wildlife Center), researchers, etc.	Long term	▪ Number of new threats emerged ▪ Report & Papers	500,000

***Timeframe:** Short term (1 to 3 years), Medium term (1 to 5 years), Long term (1 to 10 years), Short term and immediate denotes the initiation of the activity as soon as possible.

¹⁸ On periodic basis, estimation of the vulture population, nest, pharmacy and carcass survey from time to time to compare with previous estimation and maintaining a database.

2.5 Implementation

Bangladesh Forest Department will implement Bangladesh Vulture Conservation Action Plan (BVCAP) with the assistance of other concerned agencies (such as, DGDA, DLS, IUCN). Bangladesh National Vulture Recovery Committee (BNVRC) will guide and coordinate the accomplishment of the plan. Engagement of private sectors, pharmaceutical companies, media and civil societies will play an essential role for the implementation of BVCAP. Partnerships will be strengthened with existing (SAVE) and new NGOs and INGOs for the technical and other supports. South Asian Vulture Recovery Plan will be implemented through the partnerships of neighboring countries.

2.6 Monitoring and Evaluation

Monitoring and evaluation is necessary to assess the accomplishment of a plan. BNVRC will monitor and evaluate the plan after the termination of all short term and medium term activities proposed in the BVCAP. Specific and measurable indicators are proposed in the log-frame relating to the implementation of the plan which will form the basis of monitoring and evaluation. Review and revision of the proposed plan will be conducted during the 10th year (in 2025) for an updated action plan.

2.7 Challenges to Implementation

Conservation of vulture in Bangladesh is a huge challenge requiring a holistic approach. These conservation initiatives will be possible through the assistance of all concerned agencies. Positive responses from different stakeholders and the governments of the countries sharing VSZ boundaries will ensure the sound management of VSZs. The removal of harmful drugs and promotion of safe drugs is dependent on the willingness of a vast and diverse set of stakeholders. The accessibility of financial support, political stability and timely actions to identify and mitigate the threats will also play a crucial point to vulture conservation initiatives.

2.8 Financing the Action Plan

Successful implementation of a plan depends on sufficient financing. A ten year budget is attached in this plan according to the activities (Annex III). Ministry of Environment and Forests will be working out for allocating budget for ten years through the efforts of BNVRC.

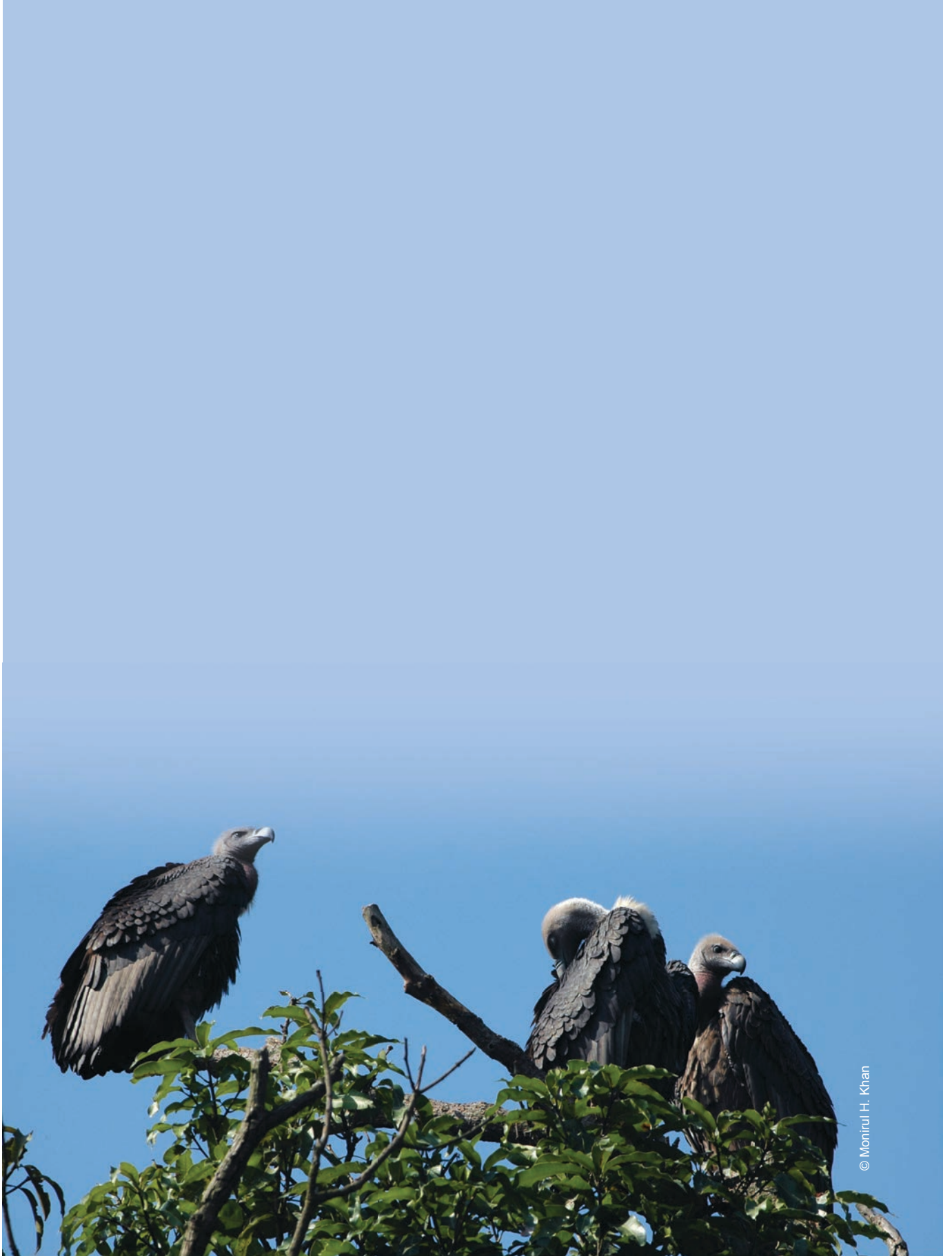
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ANNEXES

Annex I. Gazette Notification of Constitution of Bangladesh National Vulture Recovery Committee (BNVRC)

Government of the People's Republic of Bangladesh
Ministry of Environment and Forests
Environment Section-2.

No.22.00.0000.073.25.001.2013-193 Date : 25/07/2013

Notification

Ministry of Environment and Forests Government of the People's Republic of Bangladesh is pleased to constitute the National Vulture Recovery Committee for Bangladesh as described below :

Sl. No.	Name and Designation	Organization	Designation in the National Vulture Recovery Committee
1.	Dr. Aparup Chowdhury, Additional Secretary	Ministry of Environment and Forests (MoEF)	Chair
2.	Representative	Ministry of Health and Family Welfare	Member
3.	Dr. Mosaddique Hossain, Director General	Deptt. of Livestock Services	Member
4.	Mr. Ishtiaq Uddin Ahmed, Country Representative	IUCN Bangladeshi Country Office	Member
5.	Dr. A.N.M. Aminoor Rahman, Dean, Faculty of Veterinary	Bangladesh Sheikh Mujibur Rahman Agricultural University	Member
6.	Prof. Dr. Md. Kabirul Islam Khan, Dean	Faculty of Veterinary Medicine Chittagong Veterinary and Animal Sciences University	Member
7.	Dr. Tapan Kumar Dey, Conservator of Forest	Bangladesh Forest Department	Member
8.	MR. Md. Abul Khair Choudhury, Director (Current Charge)	Director General of drug Administration	Member
9.	Dr. Maqsoodul Hasan Hawleder, Curator (In Charge)	Dhaka Zoo	Member
10.	Mr. Salman F. Rahman, President	Bangladesh Aushad Shilpa Shamity	Member
11.	Dr. M. Monirul H Khan, Associate Professor	Dept. of Zoology, Jahangirnagar University	Member
12.	Ms. Tania Khan, Culture Researcher	Moulavibazar	Member
13.	Dr. Niaz Abdur Rahman, President	Bangladesh Bird Club	Member
14.	Mr. Enam Ul Haq, General Secretary	Bangladesh Bird Club	Member
15.	Mr. Muqeed Majumder Babu, Chairman	Proki O Jibon Foundation	Member
16.	Mr. A.B.M. Sarwar Alam, Assistant Project Officer	IUCN Bangladesh Country Officer	Member-Secretary

ToR of the National Committee :

- Co-ordinate and monitor law enforcement on use of diclofenac on cattle.
- Support population status monitoring of vulture.
- Encourage and develop project proposal for vulture conservation.
- Support and coordinate development and implementation of national vulture action plan.
- Encourage awareness and motivational program for vulture conservation.
- Review the progress.

 25.07.2013
 (Abu Fazal Md. Rafiuddin)
 Deputy Secretary
 Phone : 9551512
 (Contd...P/2)

= 2 =

Distribution(not in accordance of seniority)

1. Secretary, Ministry of Health and Family Welfare, Bangladesh Secretariat, Dhaka
2. Dr. Mosaddique Hossain, Director General, Department of Livestock Services, Farmgate, Dhaka
3. Country Representative, IUCN Bangladesh Country Office, House-16, Road-273, Banani, Dhaka
4. Dr. A.N.M. Aminoor Rahman, Deen, Faculty of Veterinary, Bangladesh Sheikh Mujibur Rahman Agricultural University, Sher-e-Bangla Nagar, Dhaka.
5. Prof. Dr. Md. Kabirul Islam Khan, Deen, Faculty of Veterinary Medicine, Chittagong Veterinary and Animal Sciences University, Chittagong.
6. Dr. Tapan Kumar Dey, conservator of Forests, Forest Department, Agargaon, Dhaka.
7. Mr. Md. Abul Khair Choudhury, Director (Current Charge), Director General of Drug Administration, Sastrasta, Tejgaon, Dhaka.
8. Dr. Maqsudul Hassan Hawleder, Curator (In Charge), Dhaka Zoo, Mirpur Road, Dhaka
9. Mr. Salman F. Rahman, President, Bangladesh Aushad Shilpa Shamity, Dhaka.
10. Dr. M. Monirul H. Khan, Associate Professor, Department of Zoology, Jahangirnagar University, Savar, Dhaka
11. Ms. Tania Khan, Culture Researcher, Moulavibazar.
12. Dr. Niaz Abdur Rahman, President, Bangladesh Bird Club, Dhaka.
13. Mr. Enam ul Haq, General Secretary, Bangladesh Bird Club, Dhaka.
14. Mr. Muqeed Majumder Babu, Chairman, Proki O Jibon Foundation, Dhaka.
15. Mr. A.B.M. Sarwar Alam, Assistant Project Officer, IUCN Bangladesh Country Office, Banani, Dhaka.

Requested to
nominate a
representative

Copy for kind information and necessary action to :

1. PS to Minister, Ministry of Environment and Forests, Dhaka.
2. PS to Secretary, Ministry of Environment and Forests, Dhaka.
3. PO to Additional Secretary(Environment), Ministry of Environment and Forests, Dhaka.

(Abu Fazal Md. Rafiuddin)
Deputy Secretary

25.07.2013

Annex II. Gazette Notification of Vulture Safe Zones in Bangladesh

রেজিস্টার্ড নং ডি এ-১

বাংলাদেশ



গেজেট

অতিরিক্ত সংখ্যা
কর্তৃপক্ষ কর্তৃক প্রকাশিত

বুধবার, জানুয়ারি ২৮, ২০১৫

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ ও বন মন্ত্রণালয়
বন শাখা-২

প্রজ্ঞাপন

তারিখ, ২৩ ডিসেম্বর ২০১৪

নং-পবম/বনশা-২/০২/বিপনপ্রাণী/২৫/২০১০/১৮১—বাংলাদেশের বন্যপ্রাণী (সংরক্ষণ ও নিরাপত্তা) আইন, ২০১২ এর ধারা ২০(১) এর ক্ষমতাবলে গণপ্রজাতন্ত্রী বাংলাদেশ সরকার শকুনের নিরাপদ এলাকা-১ [সিলেট, ঢাকা (আংশিক) ও চট্টগ্রাম বিভাগের আওতায় শকুনের নিরাপদ এলাকা] এর নিম্ন তফসিল বর্ণিত ১৯,৬৬৩.১৮ বর্গ কিলোমিটার এবং শকুনের নিরাপদ এলাকা-২ [খুলনা, বরিশাল ও ঢাকা (আংশিক) বিভাগের আওতায় শকুনের নিরাপদ এলাকা] এর নিম্ন তফসিল বর্ণিত ২৭,৭১৭.২৬ বর্গ কিলোমিটার এলাকাকে মহাবিপন্ন বাংলা শকুনের (*White-rumped Vulture*, *Gyps bengalensis*) সংরক্ষণ ও বংশবৃদ্ধির লক্ষ্যে বাংলাদেশ গেজেটে প্রকাশের তারিখ থেকে বিশেষায়িত Landscape Zone এবং শকুনের নিরাপদ এলাকা (Vulture Safe Zone) হিসেবে ঘোষণা করা হলো।

শকুনের নিরাপদ এলাকা-১

[সিলেট, ঢাকা (আংশিক) ও চট্টগ্রাম বিভাগের আওতায় শকুনের নিরাপদ এলাকা]

তফসিল

শকুনের নিরাপদ এলাকার নাম	জেলাসমূহ	শকুনের নিরাপদ এলাকার বাংলাদেশ অংশের মোট আয়তন	শকুনের নিরাপদ এলাকার বাংলাদেশ অংশের কোর (Core) এলাকার মোট আয়তন	শকুনের জন্য চিহ্নিত গুরুত্বপূর্ণ এলাকা বা হটস্পট (Hotspot)	মন্তব্য	শকুনের জন্য চিহ্নিত নিরাপদ এলাকার ভেতর সরকার ঘোষিত রক্ষিত এলাকা ও তার আয়তন
সিলেট, ঢাকা (আংশিক) ও চট্টগ্রাম বিভাগের আওতায় শকুনের নিরাপদ এলাকা	সিলেট, হবিগঞ্জ, সুনামগঞ্জ, মৌলভীবাজার, নেত্রকোণা, কিশোরগঞ্জ, গাজীপুর, ময়মনসিংহ, ব্রাহ্মণবাড়িয়া, নরসিংদী, কুমিল্লা ও বাগড়াছড়ি	১৯,৬৬৩.১৮ বর্গ কিলোমিটার	৭,৪৫৯.১৮২ বর্গ কিলোমিটার	রেমা-কাসেঙ্গা বন্যপ্রাণী অভয়ারণ্য (হবিগঞ্জ) দেওড়াছড়া ও কালাছড়া, মাথবপুর, করিমপুর (মৌলভীবাজার) নবীগঞ্জ (হবিগঞ্জ)	শকুনের প্রজনন ও বিশ্রামস্থল শকুনের প্রজনন ও বিশ্রামস্থল শকুনের প্রজনন ও বিশ্রামস্থল	জাতীয় উদ্যান: (লাউয়াছড়া, সাতছড়ি, মাদিমদপুর), বন্যপ্রাণী অভয়ারণ্য: (রেমা-কাসেঙ্গা) ইকো-পার্ক: (মাধবকুন্ড, টিলাপড়, বর্ষিজোড়া)। মোট আয়তন ৪,৬০৩.৯৮ হেক্টর বা ৪৬.০৩৯ বর্গ কিমি

চৌহদ্দি

উত্তর	:	সুনামগঞ্জ জেলার সোয়ারাবাজার উপজেলা ও সিলেট জেলার কোম্পানীগঞ্জ উপজেলার বাংলাদেশ-ভারত সীমানা এলাকা
উত্তর-পূর্ব	:	সিলেট জেলার জৈন্তাপুর, কানাইঘাট উপজেলার বাংলাদেশ-ভারত সীমানা এলাকা
উত্তর-পশ্চিম	:	নেত্রকোনা জেলার কলমাকান্দা উপজেলা এবং সুনামগঞ্জ জেলার ধর্মপাশা উপজেলার বাংলাদেশ-ভারত সীমানা
দক্ষিণ	:	হবিগঞ্জ জেলার চুনারুঘাট উপজেলার বাংলাদেশ-ভারত সীমানা এলাকা
দক্ষিণ-পূর্ব	:	মৌলভীবাজার জেলার কমলগঞ্জ উপজেলার বাংলাদেশ-ভারত সীমানা ও খাগড়াছড়ি জেলার দিঘীনালা উপজেলা
দক্ষিণ-পশ্চিম	:	নরসিংদী জেলার মনোহরদী, শিবপুর ও রায়পুরা উপজেলা
পূর্ব	:	মৌলভীবাজার জেলার বড়শেখা উপজেলার বাংলাদেশ-ভারত সীমানা এলাকা
পশ্চিম	:	ময়মনসিংহ জেলার গৌরীপুর, ঈশ্বরগঞ্জ, নাদাইল ও গফরগাঁও উপজেলা
অবস্থান	:	জিপিএস অনুসারে শকুনের নিরাপদ এলাকা-১ এর সীমানায় অবস্থিত ইউনিয়নসমূহের অক্ষাংশ ও দ্রাঘিমাংশ নিম্নরূপ :

টেবিল-১

নং	ইউনিয়ন	উপজেলা	জেলা	অক্ষাংশ	দ্রাঘিমাংশ
1	PASCHIM NABINAGAR	NABINAGAR	BRAHMANBARIA	23.88722867050	90.94488906860
2	SREERAMPUR	NABINAGAR	BRAHMANBARIA	23.84476435110	90.95681381230
3	SHYAMGRAM	NABINAGAR	BRAHMANBARIA	23.85538398060	90.92829560750
4	IBRAIMPUR	NABINAGAR	BRAHMANBARIA	23.82163884090	90.98715972900
5	LAUR FATHEHPUR	NABINAGAR	BRAHMANBARIA	23.79249575100	91.02172088620
6	PASCHIM JUNEDPUR	NABINAGAR	BRAHMANBARIA	23.80362966120	90.99787690170
7	MEHARI	KASBA	BRAHMANBARIA	23.76211353300	91.07658004760
8	KASBA	KASBA	BRAHMANBARIA	23.73294238650	91.14103698730
9	KAIMPUR	KASBA	BRAHMANBARIA	23.7131358310	91.15750908910
10	ANDIKOT	MURADNAGAR	COMILLA	23.77630213620	91.03795064430
11	TOKE	KAPASIA	GAZIPUR	24.21808124580	90.66358260140
12	BARISHABA	KAASIA	GAZIPUR	24.17334470060	90.68266201100
13	GHAGOTIA	KAASIA	GAZIPUR	24.15354316170	90.68993062170
14	BABUCHHARA	DIGHINALA	KHAGRACHHARI	23.71295176830	91.96382503010
15	JINARI	HOSSAINPUR	KISHOREGANJ	24.45176016250	90.60756110090
16	CHARFARADI	PAKUNDIA	KISHOREGANJ	24.30263403230	90.64554214480
17	EGARASINDUR	PAKUNDIA	KISHOREGANJ	24.25449331330	90.67294692990
18	ACHINTAPUR	GAURIPUR	MYMENSINGH	24.74651213850	90.63530731200
19	BOKAINAGAR	GAURIPUR	MYMENSINGH	24.71024065650	90.62483026060
20	ISHWARGANJ	ISHWARGANJ	MYMENSINGH	24.66687864340	90.61591634160
21	MAIJBAGH	ISHWARGANJ	MYMENSINGH	24.59135695870	90.63066101070
22	MAGTALA	ISHWARGANJ	MYMENSINGH	24.57210055070	90.60405254040
23	MOZZEMPUR	NANDAIL	MYMENSINGH	24.54339599610	90.61864471440
24	SHERPUR	NANDAIL	MYMENSINGH	24.51169762200	90.63481521610
25	KHARUA	NANDAIL	MYMENSINGH	24.49213440330	90.60485659850
26	CHARALGI	GAFFARGAON	MYMENSINGH	24.41753059580	90.61076472560
27	PANCHBHAC	GAFFARGAON	MYMENSINGH	24.40431589460	90.61541333700
28	USTHI	GAFFARGAON	MYMENSINGH	24.37976888600	90.61478454830
29	DATTER BAZR	GAFFARGAON	MYMENSINGH	24.33439144780	90.62689605180
30	TENGABA	GAFFARGAON	MYMENSINGH	24.27703970290	90.64190583080
31	CHANDANBARI	MANOHARDI	NARSINGDI	24.13537525210	90.70517349240
32	SHUKUNDI	MANOHARDI	NARSINGDI	24.10938914620	90.7150750730
33	AKDUARIA	MANOHARDI	NARSINGDI	24.07834973760	90.73276817150
34	CHAK RADHA	SHIBPUR	NARSINGDI	24.04575643760	90.75466444000
35	JOYNAGAR	SHIBPUR	NARSINGDI	24.02635361130	90.77772154110
36	JOSAR	SHIBPUR	NARSINGDI	23.99307904140	90.80933761600
37	BAGHABA	SHIBPUR	NARSINGDI	24.00764742220	90.78283724380

নং	ইউনিয়ন	উপজেলা	জেলা	অক্ষাংশ	দ্রাঘিমাংশ
38	PALASHTALI	ROY PURA	NARSINGDI	23.96298408510	90.84505462650
39	ADIABAD	ROY PURA	NARSINGDI	23.96114274680	90.81884094350
40	SREENAGAR	ROY PURA	NARSINGDI	23.93111298500	90.86051963910
41	MIRZANAGAR	ROY PURA	NARSINGDI	23.94789234450	90.83168980290
42	CHAR SUBUDDI	ROY PURA	NARSINGDI	23.93692942380	90.84064086010
43	BANGHGARI	ROY PURA	NARSINGDI	23.89133236500	90.89133911980
44	MIRZAR CHAR	ROY PURA	NARSINGDI	23.86836768620	90.91005325320
45	KHARNAI	KALMAKANDA	NETROKONA	25.10439700470	90.84030151370
46	NAZIRPUR	KALMAKANDA	NETROKONA	25.06682128680	90.80585105430
47	BAKALJORA	DURGAPUR	NETROKONA	25.00750293100	90.75407517970
48	KAILATI	KALMAKANDA	NETROKONA	25.00227437320	90.79858779910
49	KALIARA GABRAGAT	NETROKONA SADAR	NETROKONA	24.97293124750	90.74235916140
50	DHALA MULGAON	PURBADHALA	NETROKONA	24.95228727270	90.71944620100
51	MAUGATI	NETROKONA SADAR	NETROKONA	24.88897781370	90.70084341100
52	RAUHA	NETROKONA SADAR	NETROKONA	24.85443670550	90.68375015260
53	NARANDIA	PURBADHALA	NETROKONA	24.82536975720	90.65770436470
54	CHALLISHA	NETROKONA SADAR	NETROKONA	24.83291242810	90.68036651610
55	BAIRATI	PURBADHALA	NETROKONA	24.78467096540	90.64482500690
56	KHAS KANAKPUR	ZAKIGANJ	SYLHET	24.91845707890	92.44337463380

শকুনের নিরাপদ এলাকা-২

[খুলনা, বরিশাল ও ঢাকা (আংশিক) বিভাগের আওতায় শকুনের নিরাপদ এলাকা]

তফসিল

শকুনের নিরাপদ এলাকার নাম	জেলাসমূহ	শকুনের নিরাপদ এলাকার বাংলাদেশ অংশের মোট আয়তন	শকুনের নিরাপদ এলাকার বাংলাদেশ অংশের কোর (Core) এলাকার মোট আয়তন	শকুনের জন্য চিহ্নিত গুরুত্বপূর্ণ এলাকা বা হটস্পট (Hotspot)	মন্তব্য	শকুনের জন্য চিহ্নিত নিরাপদ এলাকার ভেতর সরকার ঘোষিত ক্যাশ্রাণী অভয়ারণ্য এলাকা ও তার আয়তন
খুলনা, বরিশাল ও ঢাকা (আংশিক) বিভাগের আওতায় শকুনের নিরাপদ এলাকা	ফরিদপুর, মাগুরা, বিনাইদহ, মাদারীপুর, যশোর, পোলাপাড়া (চাঁদীপাড়া ব্যতীত), নড়াইল, শরিয়তপুর, বরিশাল, বাগেরহাট, খুলনা, সাতক্ষীরা, পিরোজপুর, (ভাভারিয়া ব্যতীত), আলকাতা, পটুয়াখালী ও বরগুনা	২৭৭১৭.২৬ বর্গ কিলোমিটার	৭৮৪৬.২৫৮ বর্গ কিলোমিটার	বটিয়াঘাটা (খুলনা)	শকুনের প্রজনন ও বিশ্রামস্থল	জাতীয় উদ্যান (ফুয়াকাটা), ক্যাশ্রাণী, অভয়ারণ্য (সুন্দরবন পূর্ব, সুন্দরবন পশ্চিম, সুন্দরবন দক্ষিণ, সোনারচর, টোঙ্গাগিরি, চাঁদপাই, মুখুখী, ঢামারী) এবং উল্লিখিত মোট আয়তন ১৪৮৪৫৭.৫৬ হেক্টর বা ১৪৮৫.৫৭ বর্গ কি. মি.
				লাউভোব (দাকোপ, খুলনা)	শকুনের প্রজনন ও বিশ্রামস্থল	
				ভুমুরিয়া (খুলনা)	শকুনের প্রজনন ও বিশ্রামস্থল	

টোহদি

- উত্তর : মাগুরা জেলার মোহাম্মদপুর, মাগুরা সদর ও শালিখা উপজেলা, ফরিদপুর জেলার মনুখালী, বোয়ালমারী, নগরকান্দা ও ভাঙ্গা উপজেলা
- উত্তর-পূর্ব : মাদারীপুর জেলার শিবচর, মাদারীপুর সদর ও কালকিনি উপজেলা
- উত্তর-পশ্চিম : বিনাইদহ জেলার কালীগঞ্জ উপজেলা এবং যশোর জেলার চৌপাছা উপজেলা
- দক্ষিণ : বঙ্গোপসাগর
- দক্ষিণ-পূর্ব : পটুয়াখালী জেলার কলাপাড়া এবং গলাচিপা উপজেলা

- দক্ষিণ-পশ্চিম : সাতক্ষীরা জেলার সুন্দরবন অংশের বাংলাদেশ-ভারত সীমানা
 পূর্ব : ভোলা জেলার ভোলা সদর উপজেলা, বরিশাল জেলার মেহেন্দিগঞ্জ, হিজলা, মুলদি উপজেলা এবং পটুয়াখালী জেলার বাউফল উপজেলা
 পশ্চিম : সাতক্ষীরা ও যশোর জেলার বাংলাদেশ-ভারত সীমানা এলাকা
 অবস্থান : জিপিএস অনুসারে শকুনের নিরাপদ এলাকা-২ এর সীমানায় অবস্থিত ইউনিয়নসমূহের অক্ষাংশ ও দ্রাঘিমাংশ নিম্নরূপ :

টেবিল ২

নং	ইউনিয়ন	উপজেলা	জেলা	অক্ষাংশ	দ্রাঘিমাংশ
1	HARINATHPUR	HIZLA	BARISAL	22.97295397540	90.45521671970
2	SAFIPUR	MULADI	BARISAL	23.00623858500	90.38351038920
3	GUABARIA	HIZLA	BARISAL	22.91552226680	90.46386873780
4	BARAJALIA	HIZLA	BARISAL	22.89880316840	90.49087309470
5	ANDHAR MANIK	MEHENDIGANJ	BARISAL	22.88287572560	90.46496147660
6	CHAR EKKARIA	MEHENDIGANJ	BARISAL	22.84288808240	90.51150996900
7	MEHENDIGANJ	MEHENDIGANJ	BARISAL	22.79757812530	90.52965025640
8	ALIMABAD	MEHENDIGANJ	BARISAL	22.72163609430	90.55292009460
9	BHEDARIA	BHOLA SADAR	BHOLA	22.65080793510	90.56237318140
10	BHELU MIAH	BHOLA SADAR	BHOLA	22.58926467610	90.56573640150
11	NOAPARA	MADHUKHALI	FARIDPUR	23.44686681610	89.61207851030
12	SATAIR	BOALMARI	FARIDPUR	23.44441048860	89.67908565910
13	GATTI	NAGARKANDA	FARIDPUR	23.43163609590	89.78663570890
14	ATGHAR	NAGARKANDA	FARIDPUR	23.43589108640	89.75688277460
15	GHOSHPUR	BOALMARI	FARIDPUR	23.43758776630	89.63354005530
16	DADPUR	BOALMARI	FARIDPUR	23.42857364260	89.71570905630
17	LASKARDIA	NAGARKANDA	FARIDPUR	23.41378488650	89.86253030810
18	BHAWAL	NAGARKANDA	FARIDPUR	23.41119127580	89.81531385650
19	HAMIRDI	BHANGA	FARIDPUR	23.37976233660	89.95735954750
20	NAGARKANDA	NAGARKANDA	FARIDPUR	23.38667479740	89.88671076710
21	KAICHAIL	NAGARKANDA	FARIDPUR	23.38573302730	89.92604166470
22	TUZARPUR	BHANGA	FARIDPUR	23.36677506780	90.00614253240
23	BHANGA	BHANGA	FARIDPUR	23.35011104100	89.99181708050
24	CHANDRA	BHANGA	FARIDPUR	23.34734895770	90.04120240760
25	GHARUA	BHANGA	FARIDPUR	23.32232027720	90.02069992860
26	AZIMNAGAR	BHANGA	FARIDPUR	23.33214794150	90.07535500660
27	HAKIMPUR	CHAUGACHHA	JESSORE	23.29736000540	89.05888538990
28	PATIBILA	CHAUGACHHA	JESSORE	23.27295905220	89.03145135280
29	SWARUPDAHA	CHAUGACHHA	JESSORE	23.23639617810	88.97857456220
30	SUKPUKHURIA	CHAUGACHHA	JESSORE	23.20314523630	88.94076128670
31	NIAMATPUR	KALIGANJ	JHENNAIDAH	23.36546029250	89.19415515410
32	KOLA	KALIGANJ	JHENNAIDAH	23.37045019890	89.22936624250

নং	ইউনিয়ন	উপজেলা	জেলা	অক্ষাংশ	দ্রাঘিমাংশ
33	ROYGRAM	KALIGANJ	JHENAI DAH	23.34656283150	89.15641007240
34	RAKHALGACHHI	KALIGANJ	JHENAI DAH	23.32659528190	89.11537642790
35	KASHTABHANGA	KALIGANJ	JHENAI DAH	23.29063724150	89.10787832230
36	DATTA PARA	SHIB CHAR	MADARIPUR	23.32031349590	90.10291484260
37	SIRUAIL	SHIB CHAR	MADARIPUR	23.30499549970	90.11816317840
38	BAYRATALA	SHIB CHAR	MADARIPUR	23.28540799050	90.15279564070
39	BANSHKANDI	SHIB CHAR	MADARIPUR	23.26446812140	90.17797051130
40	BHANDARIKANDI	SHIB CHAR	MADARIPUR	23.24980534930	90.20715261250
41	CHILAR CHAR	MADARIPUR SADAR	MADARIPUR	23.22519005100	90.22219911140
42	LAKSHMIPUR	KALKINI	MADARIPUR	23.11980373080	90.30493614570
43	BABUKHALI	MOHAMMADPUR	MAGURA	23.44550446930	89.55469533110
44	RAGHAB DAIR	MAGURA SADAR	MAGURA	23.41293382380	89.33920456560
45	CHAULIA	MAGURA SADAR	MAGURA	23.43621563030	89.45990077280
46	DIGHA	MOHAMMADPUR	MAGURA	23.43684890510	89.58222192350
47	JAGDAL	MAGURA SADAR	MAGURA	23.40848326420	89.42441915710
48	BINODEPUR	MOHAMMADPUR	MAGURA	23.42557848000	89.52117146830
49	MAGHI	MAGURA SADAR	MAGURA	23.40985257640	89.38046299410
50	DHANESHWARGATI	SHALIKHA	MAGURA	23.39230215630	89.28798335160
51	DHULIA	BAUPHAL	PATUAKHALI	22.53820656910	90.55741119410
52	KESHABPUR	BAUPHAL	PATUAKHALI	22.49105514760	90.56239172460
53	SURJYAMANI	BAUPHAL	PATUAKHALI	22.46188470280	90.53870401450
54	HAZIRPUR	BAUPHAL	PATUAKHALI	22.41159059640	90.55914381070
55	MADANPURA	BAUPHAL	PATUAKHALI	22.42489357330	90.53181612750
56	BAUPHAL	BAUPHAL	PATUAKHALI	22.38997033310	90.52581797210
57	DASPARA	BAUPHAL	PATUAKHALI	22.37725645980	90.55061883560
58	NOAMALA	BAUPHAL	PATUAKHALI	22.35281416040	90.50979632380
59	BAHRAMPUR	DASHMINA	PATUAKHALI	22.31975295260	90.53758093670
60	BETAGI SANKIPURA	DASHMINA	PATUAKHALI	22.30649497260	90.52497126170
61	ALIPUR	DASHMINA	PATUAKHALI	22.23861474760	90.51308240120
62	DAKUA	GALACHIPA	PATUAKHALI	22.22233295540	90.44055118260
63	RANGOPALDI	DASHMINA	PATUAKHALI	22.20912790470	90.49405175430
64	CHIKNIKANDI	GALACHIPA	PATUAKHALI	22.17759750220	90.45152313190
65	RATANDI TALTALI	GALACHIPA	PATUAKHALI	22.14099550290	90.46290221050
66	GALACHIPA	GALACHIPA	PATUAKHALI	22.10834893230	4139015094030
67	PANPATTY	GALACHIPA	PATUAKHALI	22.09727868120	90.43353518220
68	CHANDRAPUR	PALONG	SHARIATPUR	23.21916448950	90.24675169590
69	BINODPUR	PALONG	SHARIATPUR	23.20307656010	90.26294806610
70	CHITALIA	PALONG	SHARIATPUR	23.17423330670	90.29563435930

নং	ইউনিয়ন	উপজেলা	জেলা	অক্ষাংশ	দ্রাঘিমাংশ
71	BUDRAKAR	PALONG	SHARIATPUR	23.12566590120	90.34286473050
72	ANGARIA	PALONG	SHARIATPUR	23.14497945340	90.31880991400
73	DHANKATI	DAMUDYA	SHARIATPUR	23.09826414300	90.36272459240
74	NAGER PARA	GOSAIRHAT	SHARIATPUR	23.06288300730	90.37114706840
75	SAMANTASAR	GOSAIRHAT	SHARIATPUR	23.06027003090	90.39990838440
76	IDILPUR	GOSAIRHAT	SHARIATPUR	23.03977735280	90.40737822100
77	NALMURI	GOSAIRHAT	SHARIATPUR	23.00966134800	90.43018608900

রাষ্ট্রপতির আদেশক্রমে

মোঃ নজিবুর রহমান
সচিব।

মোঃ নজরুল ইসলাম (উপসচিব), উপপরিচালক, বাংলাদেশ সরকারি মুদ্রালায়, ঢাকা কর্তৃক মুদ্রিত।
মোঃ আলমগীর হোসেন (উপসচিব), উপপরিচালক, বাংলাদেশ ফরম ও প্রকাশনা অফিস,
তেজগাঁও, ঢাকা কর্তৃক প্রকাশিত। web site: www.bgpress.gov.bd

Annex III: Government Approved Institutional Setup for Vulture Conservation in Bangladesh

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
বাংলাদেশ জাতীয় শকুন সংরক্ষণ কমিটি
পরিবেশ ও বন মন্ত্রণালয়

নং: এমওইএফ/বিএনভিআরসি/২০১৫/০০১ তারিখ: ২৩-০৪-২০১৫

গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের পরিবেশ ও বন মন্ত্রণালয় বাংলাদেশের শকুন সংরক্ষণে ২৫-০৭-২০১৩ তারিখে ১৬ সদস্য বিশিষ্ট ‘বাংলাদেশ জাতীয় শকুন সংরক্ষণ’ সংক্রান্ত একটি কমিটি গঠন করে। এছাড়া গণপ্রজাতন্ত্রী বাংলাদেশ সরকার বাংলা শকুন সংরক্ষণে ২৩-১২-২০১৪ তারিখে বাংলাদেশে দুটি ‘শকুনের নিরাপদ এলাকা’ ঘোষণা করে প্রজ্ঞাপন জারি করে। শকুনের নিরাপদ এলাকা সুষ্ঠুভাবে তদারকির জন্য জাতীয় কমিটির পাশাপাশি শকুনের নিরাপদ এলাকায় স্থানীয় পর্যায়ে শকুন সংরক্ষণ কমিটি থাকা জরুরি। এই প্রেক্ষাপটে ‘বাংলাদেশ জাতীয় শকুন সংরক্ষণ’ কমিটির চতুর্থ সভার সিদ্ধান্ত মোতাবেক শকুনের নিরাপদ এলাকায় তিন স্তরের ‘শকুন সংরক্ষণ দল’ এর কাঠামোর অনুমোদন দেওয়া হলো এবং এতদসঙ্গে বাংলাদেশ বন বিভাগকে ‘শকুন সংরক্ষণ দল’ গঠনে মাঠ পর্যায়ে প্রয়োজনীয় নির্দেশনা প্রদান ও সহযোগিতা করার জন্য অনুরোধ করা হলো।

সংযুক্তি: অনুমোদিত শকুন সংরক্ষণ দলের কাঠামো



মো: নুরুল করিম
অতিরিক্ত সচিব
পরিবেশ ও বন মন্ত্রণালয়
গণপ্রজাতন্ত্রী বাংলাদেশ সরকারের
এবং
সভাপতি
বাংলাদেশ জাতীয় শকুন সংরক্ষণ কমিটি
পরিবেশ ও বন মন্ত্রণালয়

অনুলিপি: (জ্যেষ্ঠতা অনুযায়ী নয়)

১. প্রধান বন সংরক্ষক, বাংলাদেশ বন বিভাগ
২. মহাপরিচালক, ঔষধ প্রশাসন অধিদপ্তর
৩. সভাপতি, বাংলাদেশ ঔষধ শিল্প সমিতি
৪. মহাপরিচালক, প্রাণিসম্পদ অধিদপ্তর
৫. জেলা প্রশাসক, হবিগঞ্জ, মৌলভীবাজার, সিলেট, সুনামগঞ্জ, খুলনা, বাগেরহাট, সাতক্ষীরা, ঢাকা, ময়মনসিংহ, যশোর
৬. বিভাগীয় বন কর্মকর্তা, হবিগঞ্জ, মৌলভীবাজার, সিলেট, সুনামগঞ্জ, খুলনা, বাগেরহাট, সাতক্ষীরা, ঢাকা, ময়মনসিংহ, যশোর



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শকুন সংরক্ষণ কমিটি

Vulture Conservation Committee

আঞ্চলিক পরিচালনা কমিটি (Regional Steering Committee) : শকুন রক্ষায় চারটি দেশের (নেপাল, বাংলাদেশ, ভারত ও পাকিস্তান) সম্মিলিত উদ্যোগে একটি আঞ্চলিক কমিটি গঠন করা হয়েছে। এই কমিটিতে বাংলাদেশ থেকে দু'জন প্রতিনিধি রয়েছেন। এদের মধ্যে একজন হলেন বাংলাদেশ সরকারের পরিবেশ ও বন মন্ত্রণালয়ের অতিরিক্ত সচিব জনাব মোঃ নুরুল করিম ও অন্যজন বাংলাদেশ বার্ড ক্লাবের প্রতিষ্ঠাতা সভাপতি জনাব ইনাম আল হক।

বাংলাদেশ জাতীয় শকুন সংরক্ষণ কমিটি (Bangladesh National Vulture Recovery Committee) : চারটি দেশের প্রত্যেক দেশে আবার জাতীয় কমিটি রয়েছে। বাংলাদেশেও বন ও পরিবেশ মন্ত্রণালয়ের অধীন ১৬ সদস্য বিশিষ্ট একটি জাতীয় কমিটি গঠন করা হয় ২০১৩ সালে।

উক্ত কমিটির মূল লক্ষ্য হলো :

- নিষিদ্ধ ডাইক্লোফেনাক বন্ধে যথাযথ পদক্ষেপ গ্রহণ ও পরিবীক্ষণ করা
- শকুনের শুমারি কাজে পরামর্শ ও সহায়তা প্রদান
- শকুন সংরক্ষণে বিভিন্ন প্রকল্প গ্রহণ করা
- শকুন সংরক্ষণে ন্যাশনাল অ্যাকশন প্লান তৈরিতে পরামর্শ ও সহায়তা প্রদান করা
- শকুন সংরক্ষণে বিভিন্ন সচেতনতামূলক কাজে প্রয়োজনীয় পদক্ষেপ ও সবাইকে উদ্বুদ্ধ করা
- প্রতি বছর অন্তত দুইবার সভা করা

উক্ত কমিটির সভাপতি পরিবেশ ও বন মন্ত্রণালয়ের একজন অতিরিক্ত সচিব এবং এই কমিটিতে বিভিন্ন মন্ত্রণালয়, অধিদপ্তর, সংস্থার (বনবিভাগ, প্রাণিসম্পদ অধিদপ্তর, ঔষধ প্রশাসন, ফার্মাসিউটিক্যালস কোম্পানি, চিড়িয়াখানা, বিশ্ববিদ্যালয় ও গবেষক) প্রতিনিধি রয়েছেন। উক্ত কমিটির সেক্রেটারিয়েট আইইউসিএন বাংলাদেশ।

উপরোক্ত দুটি কমিটি সক্রিয় থাকলেও স্থানীয় পর্যায়ে কাজ করার কোন কমিটি ছিল না। তাই বাংলাদেশ জাতীয় শকুন সংরক্ষণ কমিটি ও বাংলাদেশ বন বিভাগের পরামর্শ ও সহযোগিতায় আইইউসিএন বাংলাদেশ বাংলা শকুন সংরক্ষণে একটি প্রকল্প হাতে নেয় এবং স্থানীয় পর্যায়ে শকুন সংরক্ষণ দল গঠন করার কাজ শুরু করে। স্থানীয় পর্যায়ে তিনটি স্তরে এই সংরক্ষণ দল কাজ করবে।

১. গ্রাম ভিত্তিক শকুন সংরক্ষণ দল (Village Vulture Conservation Team) :

শকুনের নিরাপদ এলাকার ‘হটস্পট’ বা তদসংলগ্ন এলাকায় একটি করে চাহিদা মোতাবেক গ্রাম ভিত্তিক শকুন সংরক্ষণ দল থাকবে। প্রতিটি ইউনিটে সদস্য হিসেবে সিএমসির সভাপতি থাকা ব্যাধ্যতামূলক। এছাড়া প্রয়োজনে সিএমসির অন্যান্য গুরুত্বপূর্ণ সদস্যও থাকতে পারেন। স্থানীয় বন বিভাগ এই সংরক্ষণ দলটির সমন্বয়কের দায়িত্ব পালন করবেন। দলের অন্যান্য সদস্যদের মধ্যে থাকবেন স্থানীয় ইউপি সদস্য, হেডম্যান, ইকোগাইড, চা বাগান মালিক প্রতিনিধি, স্থানীয় পশু চিকিৎসক প্রতিনিধি, গরুর খামারিদের প্রতিনিধি, স্থানীয় শিক্ষা প্রতিষ্ঠানের প্রতিনিধি, স্থানীয় ইয়ুথ ক্লাবের প্রতিনিধি। এছাড়া সংরক্ষণ দলের সভার সিদ্ধান্ত মোতাবেক দলের সদস্য সংখ্যা বাড়ানো যাবে। এই দলটি প্রতি দুইমাস অন্তর কর্মপত্রা নিরূপন ও কার্য সম্পাদনার জন্য বৈঠক করবেন। এই সভাটি সিএসসির মাসিক সভার সাথে মিল রেখেও করা যেতে পারে।

গ্রাম ভিত্তিক শকুন সংরক্ষণ দলের সদস্যদের কার্যপরিধি :

- শকুনের সংখ্যা ও বাসা সম্পর্কিত তথ্য সংগ্রহ
- শকুনের জন্য ক্ষতিকারক ঔষধের প্রাপ্তি সম্পর্কিত জরিপ
- মৃত গবাদি পশু জরিপ
- অসুস্থ ও মৃত শকুন উদ্ধার
- পরিবেশে শকুনের প্রয়োজনীয়তা এবং শকুন সংরক্ষণে ক্ষতিকর ঔষধ বন্ধে স্থানীয় মানুষকে নিরুৎসাহিত করা

দলীয় প্রধানের দায়িত্ব ও কর্তব্য :

- দলীয় কার্যাবলী সমন্বয়ের জন্য প্রতি দুই মাস অন্তর সভার আয়োজন করা
- সদস্যদের কাছ থেকে উপাত্ত সংগ্রহ
- রিপোর্ট যথা সময়ে স্থানীয় বনবিভাগের মাধ্যমে বন সংরক্ষক, বন্যপ্রাণী ও প্রকৃতি সংরক্ষণ অঞ্চল, বাংলাদেশ বন বিভাগ এবং ফোকাল পয়েন্ট, শকুন সংরক্ষণ প্রকল্প বরাবর প্রেরণ করা

২. উপজেলা ভিত্তিক শকুন সংরক্ষণ দল (Upazilla Vulture Conservation Team)

: গ্রাম ভিত্তিক দলগুলোকে সমন্বয়ের জন্য উপজেলা ভিত্তিক শকুন সংরক্ষণ দল থাকবে। উক্ত দলেও স্থানীয় সিএমসি সভাপতি বা সভাপতি মনোনীত ব্যক্তি থাকা বাধ্যতামূলক। এছাড়া এই দলটিকে সমন্বয়কের দায়িত্বে থাকবেন স্থানীয় বনবিভাগের সহকারী বন সংরক্ষক পদ মর্যাদার একজন কর্মকর্তা। গ্রাম ভিত্তিক শকুন সংরক্ষণ দলের টিম লিডারও এই দলটিতে সদস্য হিসেবে থাকবেন। অন্যান্যদের মধ্যে স্থানীয় প্রাণিসম্পদ অধিদপ্তর কর্মকর্তা, মেডিকেল অ্যাসোসিয়েশনের প্রতিনিধি, ইউপি চেয়ারম্যান, ফার্মেসি মালিক সমিতির প্রতিনিধি, সাংবাদিক সমিতির প্রতিনিধি, পরিবেশবিদ, ঔষধ প্রশাসনের স্থানীয় প্রতিনিধি, স্থানীয় আইন প্রয়োগকারী সংস্থার প্রতিনিধি। এছাড়া সংরক্ষণ দলের সভার সিদ্ধান্ত মোতাবেক দলের সদস্য সংখ্যা বাড়ানো যাবে। এই দলটি প্রতি ছয়মাস অন্তর একটি করে সভা করবেন।

উপজেলা ভিত্তিক শকুন সংরক্ষণ দলের সদস্যদের কার্যপরিধি :

- শকুনের শুমারি কাজে পরামর্শ ও সহায়তা প্রদান
- শকুন সংরক্ষণে বিভিন্ন সচেতনতামূলক কাজে প্রয়োজনীয় পরামর্শ ও সহায়তা প্রদান
- শকুনের জন্য নিষিদ্ধ ও ক্ষতিকর ঔষধ বন্ধে পরামর্শ ও সহায়তা প্রদান

দলীয় প্রধানের দায়িত্ব ও কর্তব্য :

- দলীয় কার্যাবলী সমন্বয়ের জন্য প্রতি ছয় মাস অন্তর সভার আয়োজন করা
- গ্রাম ভিত্তিক শকুন সংরক্ষণ দলের কার্যাবলীর অগ্রগতি পর্যবেক্ষণ করা
- শকুন সংরক্ষণে বিভিন্ন সচেতনতামূলক কাজে প্রয়োজনীয় পদক্ষেপ গ্রহণ
- সভার রিপোর্ট যথা সময়ে স্থানীয় বন বিভাগের মাধ্যমে বন সংরক্ষক, বন্যপ্রাণী ও প্রকৃতি সংরক্ষণ অঞ্চল, বাংলাদেশ বন বিভাগ এবং ফোকাল পয়েন্ট, শকুন সংরক্ষণ প্রকল্প বরাবর প্রেরণ করা

৩. জেলা ভিত্তিক শকুন সংরক্ষণ দল (District Vulture Conservation Team) :

উপরোল্লিখিত দুই স্তরের সংরক্ষণ দলকে সমন্বয়ের জন্য জেলা ভিত্তিক জেলা প্রশাসকের নেতৃত্বে একটি শকুন সংরক্ষণ কমিটি থাকবে। এই কমিটি প্রতি বছর একটি করে সমন্বয় সভার আয়োজন করবেন। এই কমিটিতে পুলিশ সুপার, ঔষধ প্রশাসনের প্রতিনিধি, প্রাণিসম্পদ অধিদপ্তরের প্রতিনিধি, মেডিকেল এসোসিয়েশনের প্রতিনিধি, জীববিদ বা প্রাণিবিদ্যার শিক্ষক, স্থানীয় সুশীল সমাজের প্রতিনিধি, সাংবাদিক সমিতির প্রতিনিধি এবং উপজেলা ভিত্তিক শকুন সংরক্ষণ দলের টিম লিডার এই কমিটির প্রতিনিধি হিসেবে থাকবেন। উক্ত কমিটির সমন্বয়কের দায়িত্বে থাকবেন বিভাগীয় বন কর্মকর্তা। সভার সিদ্ধান্ত মোতাবেক উক্ত কমিটির সদস্য সংখ্যা বাড়ানো যেতে পারে।

জেলা ভিত্তিক শকুন সংরক্ষণ দলের সদস্যদের কার্যপরিধি :

- শকুন সংরক্ষণে বিভিন্ন সচেতনতামূলক কাজে প্রয়োজনীয় পরামর্শ ও সহায়তা প্রদান
- শকুনের জন্য নিষিদ্ধ ও ক্ষতিকর ঔষধ বন্ধে পরামর্শ ও সহায়তা প্রদান

দলীয় প্রধানের দায়িত্ব ও কর্তব্য :

- দলীয় কার্যাবলী সমন্বয়ের জন্য প্রতি এক বছর মাস অন্তর একবার সভার আয়োজন করা
- গ্রাম ভিত্তিক ও উপজেলা ভিত্তিক শকুন সংরক্ষণ দলের কার্যাবলীর অগ্রগতি পর্যবেক্ষণ করা
- শকুন সংরক্ষণে বিভিন্ন সচেতনতামূলক কাজে সহযোগিতা প্রদান ও প্রয়োজনীয় পদক্ষেপ গ্রহণ
- শকুনের জন্য নিষিদ্ধ ও ক্ষতিকর ঔষধ বন্ধে জেলা পর্যায়ে প্রয়োজনীয় পদক্ষেপ গ্রহণ

সভার রিপোর্ট যথা সময়ে স্থানীয় বন বিভাগের মাধ্যমে বন সংরক্ষক, বন্যপ্রাণী ও প্রকৃতি সংরক্ষণ অঞ্চল, বাংলাদেশ বন বিভাগ বা জাতীয় শকুন সংরক্ষণ কমিটি বরাবর প্রেরণ।

Annex V: Detail Budget of Bangladesh Vulture Conservation Action Plan

Detail Budget of Bangladesh Vulture Conservation Action Plan (in BDT)												
Activities	Timeframe	Budget Required	Year									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Thematic Area 1. Management of Vulture Safe Zones (VSZs)												
Programme 1: Management of Vulture Safe Zones (VSZs)												
Management of VSZs by VCTs and maintain a linkage mechanism with BNVRC and RSC	Long term	20,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Food support to vulture (especially during breeding period, if necessary)	Long term	12,000,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Predetermined species of trees plantation at VSZs(mainly hotspot areas)	Short term	4,000,000	1,000,000	1,000,000	1,000,000	1,000,000						
Safeguarding the nesting colonies and trees (marked vulture trees and others)	Long term	5,000,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Identification of new vulture hotspots and notification of VSZs	Medium to long term	1,500,000	100,000	100,000	100,000	100,000	100,000	100,000	200,000	200,000	200,000	200,000

Detail Budget of Bangladesh Vulture Conservation Action Plan												
Activities	Timeframe	Budget Required	Year									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Collaboration with the countries sharing VSZ boundaries through exposure visits, meetings, researches and by any other means	Long term	10,000,000	2,500,000			2500000			2500000			2500000
Sub-Total of TA 1 & P1		52500000	7300000	4800000	4800000	7300000	3800000	3900000	6400000	3900000		6400000
Thematic Area 2. Removal (harmful NSAIDs for vultures) and promotion (safe alternative drugs) of NSAIDs with awareness development among different stakeholders												
Programme 1: Complete removal/ ban of harmful NSAIDs for vulture												
Complete removal of banned diclofenac	Short term	1,200,000	400,000	400,000	400,000							
Ban on ketoprofen and other harmful drugs	Short term & immediate	500,000	200,000	200,000	100,000							
Develop clear guidelines on the manufacture and use of veterinary NSAIDs	Short term	500,000	300,000	100,000	100,000							

Detail Budget of Bangladesh Vulture Conservation Action Plan												
Activities	Timeframe	Budget Required	Year									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Monitor the prevalence and use of harmful NSAIDs and periodical raid to pharmacies	Long term	1,000,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Sub total of TA2 & P1		3,200,000	1,000,000	800,000	700,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Programme 2: Promote safe alternative drugs (NSAIDs)												
Collaboration with pharmaceutical companies, Bangladesh Oushod Shilpo Soniti, Retailers	Short term & immediate	100,000	20,000	50,000	30,000							
Render safe drugs	Short term & immediate	6,000,000	2000000	2000000	2000000							
Increases the effectiveness of meloxicam	Medium term	1,500,000	200,000	500,000	300,000	300,000	200,000					
Searching more safe drugs for vulture	Long term	1,500,000	100,000	300,000	200,000	200,000	200,000	100,000	100,000	100,000	100,000	100,000
Sub total of TA2 & P2		9,100,000	2,320,000	2,850,000	2,530,000	500,000	400,000	100,000	100,000	100,000	100,000	100,000

Detail Budget of Bangladesh Vulture Conservation Action Plan												
Activities	Timeframe	Budget Required	Year									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Film/programme on vulture broadcasts by electronic media	Short term immediate to long term	5,000,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Sub total of TA2 & P3		36,000,000	3,200,000	3,200,000	4,200,000	3,200,000	3,200,000	4,200,000	3,200,000	3,200,000	4,200,000	4,200,000
Sub-Total of TA 12 & P1,P2,P3		48,300,000	6,520,000	7,050,000	7,530,000	3,800,000	3,700,000	4,500,000	3,500,000	3,500,000	4,500,000	4,500,000
Thematic Area 3. Conservation breeding of vultures												
Programme 1: Establishment of vulture care and breeding center												
Facilitate vulture breeding at captivity	Long term	1,500,000	100,000	200,000	200,000	200,000	200,000	200,000	100,000	100,000	100,000	100,000
Capacity buildup	Medium term	1,500,000	200,000	500,000	300,000	300,000	200,000					
Establish visitor information centers	Short term & immediate	1,500,000	500,000	500,000	500,000							
Build up and implement vulture release plan, if necessary	Long term	100,000							50,000	50,000		
Sub total of TA3 & P1		4,600,000	800,000	1,200,000	1,000,000	500,000	400,000	200,000	100,000	150,000	100,000	100,000

Detail Budget of Bangladesh Vulture Conservation Action Plan												
Activities	Timeframe	Budget Required	Year									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Thematic Area 4. Monitoring and research on vultures												
Programme 1: Monitoring and research on vultures												
Monitoring of population trend, nest, pharmacy and carcass survey	Long term	10,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Study on ecology, breeding biology, etc. of vultures	Long term	5,000,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Biopsies of carcass of vultures	Long term	1,000,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Identify possible future threats to vulture	Long term	500,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Sub total of TA4 & P1		16,500,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000	1,650,000
Grand Total		121,900,000	16,270,000	14,500,000	14,880,000	13,250,000	9,550,000	10,150,000	11,550,000	9,100,000	10,100,000	12,550,000



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The Strengthening Regional co-operation for Wildlife Protection (SRCWP) project, the first World Bank supported regional project in South Asia, aims to build country capacity and incentives for tackling the illegal wildlife trade and other selected regional conservation threats to habitats in border areas. The project was launched in 2011 in Bangladesh and Nepal in the first phase and Bhutan joined in the second phase to bring regional collaboration in combating wildlife crime through strengthened legislative and regulatory frameworks and well-equipped specialized agencies and systems, as well as relevant training and awareness programmes for staff responsible for enforcement of wildlife laws and regulations. The project is also supporting the institutional strengthening of the South Asia Wildlife Enforcement Network (SAWEN) which was established by SAARC countries in 2011 to combat wildlife crime in the South Asia Region.

The Bangladesh Forest Department (BFD) is implementing the project through a partnership with research institutes, universities and environmental NGOs. A total of 36 sub-projects have been supported to improve the management of protected areas and conservation of flagship species through a landscape approach. Some of the sub-projects are addressing human-wildlife conflict through engagement with the local communities and civil society to foster an enduring culture of wildlife. The project has supported the establishment of a Wildlife Crime Control Unit (WCCU) within the Wildlife Circle, three Wildlife divisions in the Forest Department, and a Wildlife Centre to undertake training, research, education and awareness on the issues of wildlife conservation and protection. The regional wildlife project has supported the establishment of a Wildlife project has supported the establishment of a Wildlife Crime Control Unit (WCCU) within the Wildlife Circle, three Wildlife divisions in the Forest Department, and a Wildlife Centre to undertake training, research, education and awareness on the issues of wildlife conservation and protection. This publication has documented the outcome of the sub-project titled 'White-rumped Vulture (*Gyps bengalensis*) Conservation in Bangladesh: Establishment of Toxic Drug Free Vulture Safe Zones (VSZs) and Monitoring of the Population Trend'.



Address

Bangladesh Forest Department
Agargaon, Dhaka 1207
Bangladesh