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## FEATURED NEWS

### November 1st Declared “Clean Bhutan Day”

In October, even while preparations reached fever pitch for the auspicious coronation of His Majesty Jigme Khesar Namgyel Wangchuck and the historic celebration of 100 years of monarchy, the purity of Bhutan’s environment was not forgotten. The Ministry of Home and Cultural Affairs, in collaboration with RSPN, declared 1st November as “Clean Bhutan Day.” This year, to accommodate everyone’s busy schedule, Clean Bhutan Day was commemorated on the 28th of October.

No message or special day is complete without solid action.

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### 10th Annual Black-necked Crane Festival



>> *Spectators visit one of the exhibition stalls during the Crane festival*

At 2pm on October 29th, (incidentally, exactly when Clean Bhutan Day was celebrated,) a family of three black-necked cranes landed in Phobjika, the first to arrive this season. The adult pair and one juvenile arrived from their summer habitat in Tibet a few days earlier than the first cranes last year.

Once again this November 12th, the people of Phobjikha valley gathered to

celebrate the return of the thrung thrung karm. Early in the day, the courtyard of the newly renovated 16th century old Gangtay Monastery started to fill with locals and visitors eager for the Black-Necked Crane Festival to begin.

The festival is organized annually by the Phobjikha Environment Man-

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### White-bellied Herons Critically Endangered



Photo: Yeshey Dorji

The White-bellied Heron, *Ardea insignis*, is listed in the IUCN Red List as critically endangered because of its “extremely small and rapidly declining population.” This status means the bird is on the brink of extinction. There are about 30 herons known to live in Bhutan, but there seem to be very few recent records of the species outside Bhutan. The current IUCN estimate of 50 to 200 individuals was recently larger, based on the hope of significant numbers in remote parts of northern Myanmar. These hopes have faded fast.

A team of birders visited the Putao area of Myanmar in January 2005 and

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## Snow Leopards, Yaks, and Rhododendrons



Photo courtesy: <http://www.colemangallery.com>

Tshewang R. Wangchuk, a PhD candidate at the University of Montana, recently completed a one year field study on snow leopard (*Panthera uncia*) distribution, abundance and connectivity in Bhutan. On the 25th of November he summarized his research to a crowd of fascinated conservationists packed into the NEC conference room in Thimphu. His findings raise important questions that will directly impact Bhutan's strategy to support these majestic and elusive cats. Strikingly, Bhutan's most important conservation action may be the maintenance of yak herding.

Snow leopards live on scree slopes and alpine meadows above 3000 meters. Their range stretches over 12 countries from Assam to Afghanistan, right across Tibet, and north to Kazakhstan, Russia, and Mongolia. Nevertheless, experts estimate a total population of only 3500 to 7000. The cats share parts of their habitat with other carnivores including common leopards, tigers, Tibetan wolves, red foxes, wild dogs, and Himalayan black bears. Snow leopards hunt blue sheep for most

of their diet, but also prey on marmots, pikas, snow cocks, partridges and young yaks. Encouragingly, Tshewang's team found signs of the cat in almost all the snow leopard habitat they investigated. The cats, however, are rarely seen and people who do catch a glimpse are very fortunate.

Tshewang and his team scoured the ground for scats and scrapes as they hiked and climbed along transects through snow leopard habitat right across Bhutan's highlands. Scat was found from Torsa Strict Nature Reserve to the Bumdeling Wildlife Sanctuary. The team used a combined approach to maximize their chances of finding signs of the cats. Geographic analysis on computers allowed Tshewang to focus on areas with the appropriate vegetation and elevation. Local guides and park rangers were indispensable to the team for their expert tracking skills and knowledge of the ridges, outcrops, saddles, and paths that snow leopards frequent.

Tshewang will soon return to the University of Montana to extract DNA from the scats. Sophisticated techniques will allow him to estimate the number of snow leopards living in Bhutan and shed light on the cats' genetic relationships and geographic connections.

Leopards face habitat loss and fragmentation due to human encroachment, but connectivity between habitats is crucial to maintain genetic diversity. Isolated populations with too few individuals are at risk of poor health and low viability

due to inbreeding. We eagerly anticipate the results of his analysis.

Even prior to DNA evidence, however, Tshewang and his team conjecture that yak herding may be a significant means to preserve snow leopard habitat. In recent years, yak herding has declined in Haa, Lunan, and Singye Dzong. The absence of yaks leads to a dramatic transition in vegetation from grassland and meadow to rhododendron thickets. Blue sheep, the main prey for snow leopards, avoid the rhododendrons almost entirely. As a consequence, meadows once populated by yaks, blue sheep, and snow leopards become devoid of all three, replaced by rhododendrons.

For millennia, Bhutanese yak herders have shown exemplary tolerance in the face of losses to snow leopards. Elsewhere, vengeance and anger take the upper hand, but Bhutanese herders calmly attribute their misfortune to bad luck and displeased deities. This remarkable attitude has been one of the snow leopard's greatest allies and deserves official encouragement. In combination with innovative, alternative livelihoods, yak herders may well lead the charge to protect the snow leopard in Bhutan.

For Bhutanese ecologists, important research remains to be done on alpine vegetation and its interaction with both wild animals and domestic livestock. For conservationists, it is important to communicate the symbolic importance of the snow leopard to Bhutan and the various threats it faces. Given its vast range, the snow leopard's long-term survival is a multinational issue, but Bhutan has an important role to play. Blessed with a noble king, a progressive government and a compassionate people committed to the protection of the nation's natural treasures, Bhutan is uniquely positioned to lead the research, education, and conservation effort.

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## White-bellied Heron *Critically Endangered*

retraced the steps of Ben King's 1998 expedition which had observed the species. Despite three weeks of dedicated effort, they did not see a single heron. Though extremely remote, local disturbance of rivers by fishermen and livestock has nonetheless increased, especially in the wide, braided sections favoured by the species.

Furthermore, despite an increase in the number of birders visiting the North-east Himalayas, there has been no increase in White-bellied Heron sightings. The only regular sightings in India are from Namdapha and probably relate to the same one or two birds. Elsewhere in India, sightings are few and far between. There remains the possibility that some

herons exist in un-surveyed areas of India, but anecdotal evidence suggests that this is highly unlikely.

The situation in Bhutan is better, with eight nesting sites known to RSPN researchers. The heron's preferred habitat is characterised by clear, fast flowing water over pebbly substrates, though some live beside lakes. It roosts and nests in Chir pine forest. Habitat modification due to hydropower development and road improvement, however, poses a serious threat. The deep, croaking, *ock ock ock ock urrrrrrr* still resonates in the Punatsangchu valley but soon may be just a memory.

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“Keep Bhutan Green” Opens at CICCC Ground



>> HRH Ashi Chimi Yangzom Wangchuck opens the exhibition



In Thimphu, the Citizen’s Initiative for Coronation and Centenary Celebrations (CICCC) dedicated the week from November 19th to 26th to the theme of “Keep Bhutan Green”. Her Royal Highness Ashi Chimi Yangzom Wangchuck opened the event at the CICCC ground. To commemorate both 100 years

of monarchy with farsighted conservation stewardship and the coronation of His Majesty Jigme Khesar Namgyel Wangchuck, the National Environment Commission launched the report, *Bhutan Environment Outlook, 2008*, along with Clean Bhutan audiovisual awareness and educational material.

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10th Crane Festival

agement Committee (PEMC), a local community group composed of elected leaders and development sector representatives in the valley. RSPN supports the festival both to celebrate the cranes’ arrival and to generate awareness of the importance of crane conservation.

The festival’s chief guest was Khenchen of the Kuenzanchholing Sheda at Gangtay, a highly learned Buddhist scholar. His speech used Buddhist beliefs to stress the importance of nature conservation for the sake of all living beings.

The local communities, schools, and the monastic institution presented a variety of cultural performances, including traditional mask and folk dances. The highlight was the graceful crane dance performed by local school children.

Last year, over 300 cranes spent the winter in the Phobjikha valley out of a total of 453 cranes recorded in Bhutan as a whole. Other winter habitats in Bhutan include Khotokha in Wangdi, Geytsa, and Thangbi in Bumthang, and Bumdeling in Trashiyangtse. The cranes usually spend over four before returning to their Tibetan summer habitats in mid-March.

Black-necked Crane Count (as of 21 December 2008)



| Date                                | Total Cranes              |
|-------------------------------------|---------------------------|
| <b>PHOBJIKHA</b>                    |                           |
| 31 October 2008                     | 28                        |
| 2 November 2008                     | 59                        |
| 4 November 2008                     | 116                       |
| 10 November 2008                    | 176+                      |
| 17 November 2008                    | 185+                      |
| 1 December 2008                     | 255                       |
| 8 December 2008                     | 291                       |
| 21 December 2008                    | 322 (25 juveniles)        |
| <b>BUMDELING (28 November 2008)</b> | 79                        |
| <b>BUMTHANG (1 november 2008)</b>   | Geytsa : 4<br>Thangbi : 2 |
| <b>TOTAL</b>                        | <b>407 cranes</b>         |

Hodgson’s Frogmouth: New Family & Species for Bhutan

Submitted by: Chris .G Bradshaw and Peter Lobo



Photo: Peter Lobo

During late March and early April we enjoyed a birding tour of Bhutan with three other birders. On the evening of 9th April 2008 we camped a few kilometres up the road from Deothang at an elevation of 1250m in a small orange orchard with patches of forest nearby. After dinner we retired for the night. At around 9 o’clock, Chris Bradshaw heard the distinctive call of a Hodgson’s Frogmouth, *Batrachostomus hodgsoni*, a species he had heard previously in Vietnam. When traffic noise drowned out any further calls, he wondered if he had been dreaming. Then, 20 minutes later, he heard the call

again and got up to investigate. Down by the road at least two Hodgson’s Frogmouths were calling. One bird responded to Bradshaw’s recordings of the species. Barely able to contain himself, he shouted up to the group “Hodgson’s Frogmouth!” Peter Lobo, James Yurchenko and Amy Lauterbach soon arrived and enjoyed superb views of one precocious bird and they heard two others calling. The one precocious individual responded so well to the recording that it eventually perched on a low branch above the tents! Peter Lobo was able to take several excellent photographs.

Hodgson’s Frogmouth has a range extending from Northeast India through Bangladesh and Burma, southern China, Thailand, Laos and central Vietnam. In the Indian subcontinent it resides in the hills of Sikkim, Arunachal, South Assam hills and Central Bangladesh. Although its occurrence here is perhaps unsurprising, Spierenburg (2005, *Birds in Bhutan, Status and Distribution*) does not list any species of Frogmouth and, as far as we are aware, there are no previously confirmed records for Bhutan.

>> *Contd. from page 1*

## November 1st Declared “Clean Bhutan Day”



>> *General public take active part on Clean Bhutan Day*

True to its word, the Clean Bhutan Initiative supported a massive cleaning campaign throughout the kingdom. This monumental effort was coordinated locally within each of 20

Dzongkhag administrations and made possible by a total of Nu. 10,65,000.00. Thimphu sparked as it buzzed with food and festivity. Even as the streets were flooded with visitors from around

Bhutan and across the world, many residents commented with great pleasure that they could not remember the city feeling cleaner.

We can take pride in how the Clean Bhutan message not only raised public consciousness on the issues of air, water, and land pollution, but strengthened the festive spirit of these once-in-a-lifetime celebrations. Hopefully, our pride is infectious and more Bhutanese will make the conscious decision to preserve and improve the purity of our land, a purity that is central to our identity as a country. Clean Bhutan Day, now a fixture on the national calendar, may serve to inspire individuals and communities to act together for the proper management of waste in their local areas for years to come.

## Safe Drinking Water for Ghaney village in Kanglung

*Submitted by Jigme Nidup*



Clean drinking water is a basic necessity of life. A group of us from the Department of Geography and Planning, Sherubtse College, wanted to address the chronic shortage of safe water in Ghaney village. With funding from RSPN's Bhutan Water Partnership we were able to embark on a project to store and distribute clean water to Ghaney.

Ghaney village is the most remote village in Kanglung geog. In the past, villagers had clean water piped to their homes with bamboo. Sedimentation and debris in the summer caused problems, but nothing like the problems caused when the pipelines were washed away by a flash flood. Since then, villagers got water from streams and paddy fields.

We decided to build two permanent concrete water tanks, underground pipelines and basic plumbing to benefit four households consisting of about 60 people in total. The combined effect has been

wonderful. Piped water with taps for each household saves considerable time and the easy access has had an impact on attitudes towards sanitation and hygienic behavior. Perhaps most importantly, the people suffer fewer water-related diseases.

On a deeper level, we hope the project has raised the villager's awareness of water resources and the many factors that influence a safe, reliable water supply. In time, this may promote an environmental ethic to be rooted in the traditions of the community. Fostering such attitudes is essential to the long term sustainability of grassroots initiatives such as ours.

To ensure the project's sustainability, we encouraged active participation from the village. We planted trees and erected fencing around the tanks and catchment areas and villagers were involved in the project from consultation to decision making. The responsibility for future management and monitoring will be assumed by the villagers as well.

The strategy has been successful so far. Cheten Zangmo said, “My family drank water collected from a nearby paddy field for years. We're relieved to finally have a clean and reliable source of drinking water.” Other villagers were pleased by the savings in time and effort, especially in the busy summer months. The Kanglung Gup, Ugyen Dorji, was thankful for the



improvement to people's lives and suggested it may help stem rural-to-urban migration.

Many benefits go both ways. Pema Wangchuk, a third year geography student, reported, “Through this project, I have learned a lot about village life and also how I can apply my theoretical knowledge in the field.” We hope more students like Pema will soon rise to the many challenges facing Bhutan's rural communities.

We are grateful to Bhutan Water Partnership and RSPN for funding the project.

Contribute your opinion or views on environment conservation in our ONLINE FORUM by registering for FREE at [www.rspnbhutan.org](http://www.rspnbhutan.org)

## Report on State of the Local Environment from Nature Clubs

In April, we sent out a question form to all 110 RSPN-affiliated nature clubs across Bhutan. We asked the clubs to tell us about the state of their local environment, and the threats posed to the land, air, water, forests, and wildlife.

Most clubs chose not to respond, but we were very excited by the 20 clubs that did. The format was open, so clubs could address issues as they saw fit. The creativity and perception of the responses was striking. Thank you for helping us to understand your local issues.

If you haven't yet submitted your club's report, we are still accepting them. Mail it, fax it, or submit it online: [www.rspnbhutan.org](http://www.rspnbhutan.org)

### GOOD NEWS...



Overall, the nature clubs reported excellent news. Most respondents hail from rural areas and experience clean water, clean air, and expansive, vibrant forests around productive farm land. We were heartened by people's pride in Bhutan's beautiful countryside.

Some respondents were from semi-urban areas and two from urban locations. Here too, most people have access to clean water and are not far from green pastures and forests to clear their minds from the busy city life.

There are problems, especially as human populations and development boom across the country. We will get into the dirty details, but first, we wanted to celebrate the vigour of nature in our beautiful land. May we strive to maintain the health and diversity of our environment as we delve deeper into the 21st century.

### LANDSLIDE!!

The most reported problems were landslides and erosion. The situation is understandably worse in areas with steep slopes and less vegetation. When it rains

hard, everything can turn to mud and slide away.

Humans can make the problem much worse. Construction of roads and buildings often require steep earth cuts and cause slides and erosion in communities from Bjishong MSS in Gasa right over to Trashigang MSS.

Tsirangtoe LSS, Tsirang, noted a common combination of impacts: Increasing population results in deforestation for domestic firewood and commercial logging. Trashigang MSS reported that their dzongkhag's susceptibility to severe forest fires also removes the vegetation. This issue is compounded by industrial activity, such as the quarry near Kanglung MSS, Trashigang. Pressure on the forest means more soil slips away year after year.



Gonpasingma LSS in Pemagatshel told a scary story. A 12km stretch of road from Monglin to Ngangmalang is not fitted with proper drainage. The road funnels water into the fields in such great quantities that terrible landslides result. Last summer, a staff member and his wife were nearly killed as they slept: They were carried almost 10 meters and their shed was washed completely away!

Khoma LSS, Lhuentse, also experiences landslides due to a faulty drainage system. Because it is their septic system that leaks, they face the added problem of poor sanitation. Khoma LSS also made the keen observation that landslides and erosion are a greater problem at higher elevations where the vegetative cover is less and the impact of grazers' hooves is greater.

Trees, bushes, and grasses are the best protection against soil loss. Grasses grow quickly with dense root systems while, over time, bushes and trees build extensive, interlocking root systems. Especially construction sites should be given new greenery as soon as possible.

Soil is the flesh of the land; without it, nothing survives. All sentient beings

depend on forests and agriculture, so protecting and improving the soil is the top priority.

### GROWING PAINS



In the race to develop we must recognize the full costs involved to people and our environment.

Almost every club noted a marked increase in construction. Gelephu HSS, in an area inhabited by some 3000 people, reported 17 new buildings in 2006, 25 in 2007, and 30 new buildings this year!

New developments usually take over farm land. Lhuentse Pry School has seen "booming" development reduce farm land to a "tiny portion." As land disappears and populations rise, Pemagatshel MSS noted that agricultural land is fragmented to the point that it can no longer sustain a family. In Lhuentse, Tangmachu MSS noted the associated problem of overgrazing.

Water shortages can also increase as the crowds grow. At Lhuentse Pry, old infrastructure adds to the problem as reserve tanks fill with sand and leaves. Pipes laid in the 1970's clog or leak and make the water dirty. Bjishong MSS in Gasa also reports muddy water due to improper infrastructure.

While some farms are crowded, many others are deserted as people migrate to urban areas. Samdrup Jonkhar MSS is witness to "sky-rocketing" rural to urban migration that puts a lot of pressure on their community to build new settlements. The construction boom threatens the forest around their city and the wildlife that lives there, including elephants, golden langurs, and hornbills.

Most communities noted an increase in roads. For all their benefits, roads mean vehicles belching exhaust and increased cargo loads of goods wrapped in plastic and other trash.

>> *Contd. on page 6*

## Report on State of the Local Environment

### DIRTY, DIRTY PEOPLE



Litter and defecation in improper areas remains a serious problem in many towns and for many reasons.

Tshaphel LSS, Haa, says it's difficult to get people to care about pollution. In Wangduephodrang, Nobding LSS noted vehemently: The people, not the litter, are the problem.

They report that Nobding looks dirty and multiple attempts to clean up have been in vain. "Oblivious to the filth around them," many people wait until night to litter in the streets and then use the designated trash pits as a toilet. Consequently, the town smells badly and business from visitors passing on the highway is discouraged.

Far worse than lost tourist revenue, dirty habits can harm or even kill living beings. Sarpang HSS is located on a river bank abused with litter and defecation due to insufficient facilities. What might be a riverside paradise is instead a smelly waste pit that contaminates the water for all who live below.

Trashigang MSS is concerned about the same problem, as toilets empty directly into the river. Fortunately, a proper sewage system is under construction.

The Yongla Goenpa, situated inside Gonpasingma LSS's water catchment, has harmed the students. Some visitors to the Goenpa choose to defile the watershed (and their merit) by defecating in the surrounding bush. In the last four months, 60% of the Gonpasingma's students suffered from diarrhoea. Hospital water tests concluded that the water is unhygienic and not fit to consume. This compounds their problem of winter water shortages.

Yebilatpsa MSS, in Tingtibi, Zhemgang, has municipal trash collection to keep their town clean. In landfills, however, compost that could be soil and materials that could be recycled are lost in the heap.

Gelephu has 14 scrap dealers. This is an excellent way to reuse and recycle

materials, generate business and improve the environment, all at the same time.

Populations used to be small and food used to be served on leaves. Now there are more people and our wrappers don't decompose. Individual by individual, our habits must change.

### CRAVING GREENERY



We got some interesting reviews from eco-savvy city slickers at Phuentsholing HSS. While most other schools report "abundant" and "beautiful" forests, students in Phuentsholing complain that there are no easily accessible forests or parks and instead an abundance of barren, scrubby areas.

In the so-called developed nations of the West, doctors report an epidemic of "nature deficit disorder." Health consequences when we are deprived from forests, rivers, and other species include depression, long recovery times from illness, and poor concentration.

Regular contact with nature is a fundamental human need. Exposure to nature reduces fatigue, stress, heart rate, and blood pressure, while increasing oxygen in the blood. Time spent with Mother Nature even improves cognitive performance.

So, if your town is growing fast and you think green areas are losing out to the concrete jungle, tell your leaders how much better you will perform in your exams if surrounded by trees, birds, and clean air

### GIVE ME AIR!

In rural Bhutan, most people agree the air is fresh and pure, but not so in the cities. Bad air from factories, coal and gypsum transportation, vehicle exhaust and trash fires add to the problems already created by dry winter dust.

As described by Phuentsholing HSS, these increase the incidence of asthma and other symptoms of poor air quality.

Even rural areas can suffer from "urban" air when industry gets too close. The town of Pemagatshel has an open cast mine and two gypsum-grinding factories nearby that fill the air with dust. Some people find it difficult to breathe. Under a coating of white, plants suffer and cannot photosynthesize.

### OUR WILD FRIENDS



Most clubs were happy to report an abundance of wild neighbours living in the forests and meadows near their community.

Living together is not always easy. Goenshari PS feels blessed to have so many wild friends, including the critically endangered white-bellied heron. The dark side of this blessing, they add, is the distinct threat of wildlife attacks to children as they walk through thick forest on their way to school – not by herons of course!

Our beloved wild animals also sometimes ruin our crops. From elephants, bears, and boars, to monkeys and wild dogs, farmers often have their hands full to protect their livestock and crops.

We must collectively share some of the blame. Several schools mentioned that people are engrossed in their own needs to the neglect of the animals'. As our habitat expands, theirs shrinks.

Kanglung MSS has noticed the population of oak trees near their community diminish year by year, used for cremation ceremonies and firewood. Their nature club fears that without protective

## Report State of the Local Environment

measures, the oak population could be eradicated.

Humans are generalists, so we can survive under a broad range of conditions, but many animals are very particular about their home. Even the loss of one type of habitat, such as oak trees, can have profound effects that will reverberate through the complex web of ecological relationships.

### THE ANCIENT ROLE OF TSERI

The majority of Bhutanese are farmers, an old and noble profession that works intimately with nature. Despite disagreements with boars and monkeys, poorly timed rains and destructive winds, farmers can be nature's best friends.

Gomphu LSS, Zhemgang, and other schools noted that Tseri agriculture continues despite the ban. Historically, the many ancient variations of Tseri in Bhutan have been ecologically sustainable.

New research suggests that the "mosaic" of forest patches left by Tseri increases the richness and diversity of plant and animal life. With greater numbers of small animals, predators are better fed and potential farm pests are more likely to find their food in the woods.

Some Bhutanese ecologists suggest that Tseri's mosaic used to act as a buffer between human settlements and the forest, reducing crop damage by wildlife. Now, however, the forest edge grows right up against the fields giving wildlife quick access to human crops.

Gomphu LSS also remarked that it is problematic to ban someone's livelihood and ancient way-of-life.



Tseri, if practiced correctly, does not lead to substantial erosion. The light burn does not impact large trees and dibble-planting keeps the forest's soil structure undisturbed. Because a diversity of crops are planted, roots reach down and support the soil at different depths.

Ploughed fields, even when terraced, can cause significant soil erosion. Scientists now agree that disruption of the soil's structure with the plough can lead to a loss of fertility, less topsoil, fewer microorganisms, and more weeds.

New techniques are beginning to emerge, inspired by ancient farming practices that were almost all zero-tillage. Perhaps future farms will look to the past to make farming easier, more productive, and better for the soil and the life it supports.

### BRAINSTORMING ENERGY SOLUTIONS

Tsirangtoe MSS reported an interesting combination of problems: Strong winds blow in their face and their water source is insufficient and far away. Com-

binning these resource issues might produce one solution: Wind mills could be erected to pump water to the town.

The approach of turning a problem into a solution might work in some areas for erosion as well.

On hills, water can cause problems if development doesn't consider how it flows. Erosion can be prevented and water collected at the same time with small dams and a drainage system.

Electricity can even be generated from water flowing downhill through drainage pipes fitted with microhydro spinners! In fact, this is the cheapest small-scale electricity solution available.

Nepal has been a leader in this technology and Bhutan's Department of Energy is closing the gap, so talk to your leaders about the potential for wind and microhydro electricity in your community.

This activity has been carried out with financial support from UNDP, Bhutan.

### Royal Botanical Park Inaugurated

In an effort to conserve our country's rich flora and fauna, Bhutan laid another milestone on October 22nd when the Royal Botanical Park was inaugurated by Her Majesty Ashi Dorji Wangmo Wangchuk. At an altitude of 2800m, the park covers roughly 47 square kilometers and is another victory for Bhutan's natural heritage.

The Royal Botanical Park is not only a remarkable exhibit for exotic plants, many of which are endemic to Bhutan, but is also home to several rare species

of birds and animals. Perhaps of even greater importance for the fauna, the new park serves as a biological corridor connecting Jigme Dorji Wangchuk National Park and Jigme Singye Wangchuk National Park. Connectivity between natural areas is essential for Bhutan's birds and animals to maintain healthy and diverse gene pools.

The park's immense flora and fauna resources have much to offer nature-loving human visitors as well. Easy access from the East-West National Highway will make it a natural hub for biodiversity research, education, recreation, and tourism.

#### ONLINE OPINION POLL RESULTS

Question: **Whose responsibility is it to maintain one's surrounding clean?**

Answer:

- **Individual: 49 votes**
- **Agencies/Authorities: 0 vote**
- **Respective Municipalities: 2 votes**
- **Don't Know: 0 vote**

**TOTAL VOTES: 52**

To vote on opinion polls, log on to [www.rspnbhutan.org](http://www.rspnbhutan.org)

## WORD SAFARI

For every bird, there is a scientific group name which the ornithologists classify and categorise various species of birds accordingly.

We have gathered following major group name of birds with group details. Please find the words which are highlighted in **bold** in group names. An example is shown below to help you get started.

| GROUP NAME              | GROUP DESCRIPTION                                       |
|-------------------------|---|
| <b>Anseriformes</b>     | Ducks, geese, swans                                     |
| <b>Apodiformes</b>      | Swifts, needletails, treeswifts                         |
| <b>Bucerotiformes</b>   | Hornbills   |
| <b>Ciconiiformes</b>    | Storks, raptors, seabirds, shorebirds, sandgrouse       |
| <b>Columbiformes</b>    | Pigeons, doves  |
| <b>Coraciiformes</b>    | Kingfishers, bee-eaters, rollers                        |
| <b>Craciiformes</b>     | Scrubfowl, maleo  |
| <b>Cuculiformes</b>     | Cuckoos, malkohas, coucals                              |
| <b>Galliformes</b>      | Pheasants, partridges, francolins, grouse, fowl, quails |
| <b>Gruiformes</b>       | Cranes, bustards, finfoots, rails, crakes, gallinules   |
| <b>Passeriformes</b>    | All perching birds                                      |
| <b>Piciformes</b>       | Woodpeckers, wrynecks, barbets, honeyguides             |
| <b>Psittaciformes</b>   | Parrots, parakeets, cockatoos, lorikeets etc.           |
| <b>Strigiformes</b>     | Owls, frogmouths, nightjars                             |
| <b>Struthioniformes</b> | Cassowaries   |
| <b>Trochiliformes</b>   | Hummingbirds  |
| <b>Trogoniformes</b>    | Trogons   |
| <b>Turniciformes</b>    | Buttonquails  |
| <b>Upupiformes</b>      | Hoopoes   |



|          |          |          |          |          |          |   |   |   |   |   |
|----------|----------|----------|----------|----------|----------|---|---|---|---|---|
| <b>A</b> | <b>N</b> | <b>S</b> | <b>E</b> | <b>R</b> | <b>I</b> | A | B | C | D | E |
| F        | P        | C        | B        | U        | C        | E | R | O | T | I |
| G        | C        | O        | H        | I        | I        | J | K | L | L | M |
| N        | O        | R        | D        | P        | C        | Q | R | U | S | T |
| U        | V        | A        | A        | I        | O        | W | X | B | Y | Z |
| Z        | Y        | C        | X        | C        | N        | Q | E | I | R | T |
| Y        | A        | I        | E        | I        | I        | O | U | K | A | R |
| R        | S        | I        | G        | P        | I        | I | N | P | N | M |
| G        | V        | W        | R        | T        | R        | K | L | A | Q | J |
| T        | A        | C        | U        | C        | U        | L | I | S | N | E |
| C        | S        | L        | I        | R        | I        | B | X | S | B | U |
| X        | T        | C        | I        | G        | H        | S | A | E | Q | C |
| T        | R        | V        | H        | N        | F        | U | U | R | C | J |
| T        | U        | G        | Y        | U        | X        | Z | P | I | C | I |
| S        | T        | R        | I        | G        | I        | G | S | U | E | W |
| R        | H        | I        | N        | U        | N        | V | I | D | P | S |
| W        | I        | T        | R        | I        | S        | C | T | A | W | I |
| Z        | O        | D        | R        | S        | C        | Y | T | U | M | N |
| E        | N        | D        | F        | G        | B        | I | A | Y | U | I |
| S        | I        | R        | V        | E        | S        | D | C | M | J | J |
| T        | R        | O        | C        | H        | I        | L | I | X | A | B |

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