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Natura

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BRIDGES TO THE WILD

EDITORIAL

Nature is deeply intertwined with our lives, our well-being, and our future. Coexistence begins with recognizing this interconnection. In a world shaped by rapid development and shifting climates, the call to reconnect with nature has never been more urgent, or more hopeful.

In this edition of Natura, Bridges to the Wild, we explore the powerful, the personal, and the collective ways people are reconnecting with the natural world - choosing harmony over conflict, respect over control. As you turn the pages, you'll find stories of coexistence, where people are not just preserving wildlife and ecosystems, but learning to live alongside them. These stories remind us that coexistence is not a distant ideal, it's already unfolding in forests, coasts, cities, and deserts.

We hope this issue sparks reflection, dialogue, and most importantly, action. Because every bridge built, between people and wildlife, is a step toward a more balanced, hopeful world.

By Shahgan Hummayoun Butt, Coordinator - Digital and Brand, WWF-Pakistan

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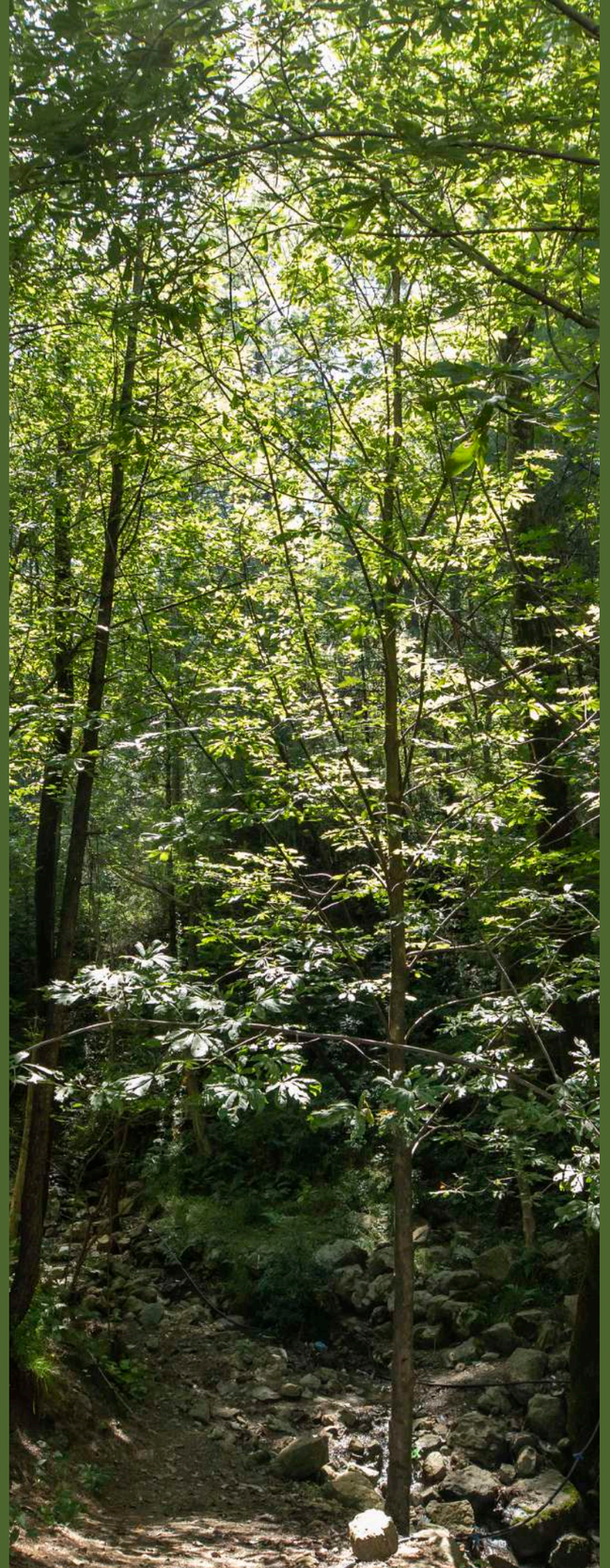

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LIVING WITH THE COMMON LEOPARDS OF ISLAMABAD

By Mohebullah Naveed

Conservation Officer at Himalayan Wildlife Foundation

Nestled between the bustling metropolis of Islamabad and the rugged wilderness of the Margalla hills, an unexpected coexistence thrives.

The common leopard (Panthera pardus), a majestic and elusive big cat, has found sanctuary in the Margalla Hills National Park (MHNP)—a testament to successful conservation efforts in an urban-adjacent ecosystem.

Declared a National Park in 1980, the Margalla hills span approximately 17,386 hectares and serve as a vital ecological corridor in the lesser Himalayas. Over the last few years, strict protection measures, habitat restoration, and anti-poaching efforts have allowed wildlife to flourish.

Among the park's most remarkable residents is the common leopard, a species that has not only survived but thrived in this unique blend of city and wilderness. Unlike their counterparts in remote forests, the leopards of Margalla hills have adapted to living near human settlements.

They primarily prey on wild boars, barking deer, monkeys, and—occasionally—livestock; maintaining a delicate balance between natural predation and human activity. Remarkably, these leopards have learned to avoid direct conflict with humans, often moving stealthily under the cover of darkness.

I have been monitoring this population of common leopards since 2018, working closely with the Islamabad Wildlife Management Board, the custodian of the MHNP.

I often heard tales from local villagers, whispers of big cats slinking through the forest, just beyond the tree line.

Their stories intrigued me, and I began my search in earnest, looking for any signs that could prove their presence and pugmarks pressed into the earth, or the faint trail of scat beneath the canopy.

Each day, I combed through the dense undergrowth, my senses sharpened by anticipation. The leopards were there but they remained one step ahead, invisible in the green maze. Common leopards are intelligent and cautious, masters of stealth with an uncanny ability to read human movement.

The breakthrough came with camera trapping, a non-invasive technique to study wildlife in their natural habitat. I still remember the electric thrill that surged through me the day I found fresh pugmarks near a village trail. I knelt beside them, awed not only by their size, but by their nearness to human life. They had always been there, quietly coexisting.

After months of tireless effort, the cameras began to tell their story. The first images appeared grainy at first, but unmistakable. A leopard, eyes glowing in infrared light, padded silently past the lens. My heart pounded as I stared at the screen. The myth had become real.

In 2021, the Islamabad Wildlife Management Board, with support from the Himalayan Wildlife Foundation, launched a scientific survey.

I had the honour of being the lead of a team. Our work revealed an estimated population of eight common leopards residing in the MHNP, a number that felt both fragile and full of promise.

The story of Margalla's leopards is not a sudden miracle. It is the continuation of an ancient relationship, one where humans and wildlife have learned, over time, to live in shared spaces. Generations of communities around the Margalla hills have grown up hearing stories of these big cats and treating the forest with reverence.

Many locals understand that the presence of wildlife signals a healthy ecosystem, something to respect, not fear.

What we see today is not just a fragile peace, but the slow turning of conflict into coexistence. The leopards are not alone—porcupines, wild boars, barking deer, foxes, and even birds of prey have also adapted to the edges of human life. This delicate harmony is evidence that, when given space and respect, nature finds a way to thrive.

In a world where human-wildlife conflict often ends in tragedy, the Margalla Hills offer an alternative, a landscape where patience, awareness, and conservation allow species to share their ground.

A SYMBOL OF HOPE IN A GROWING CITY

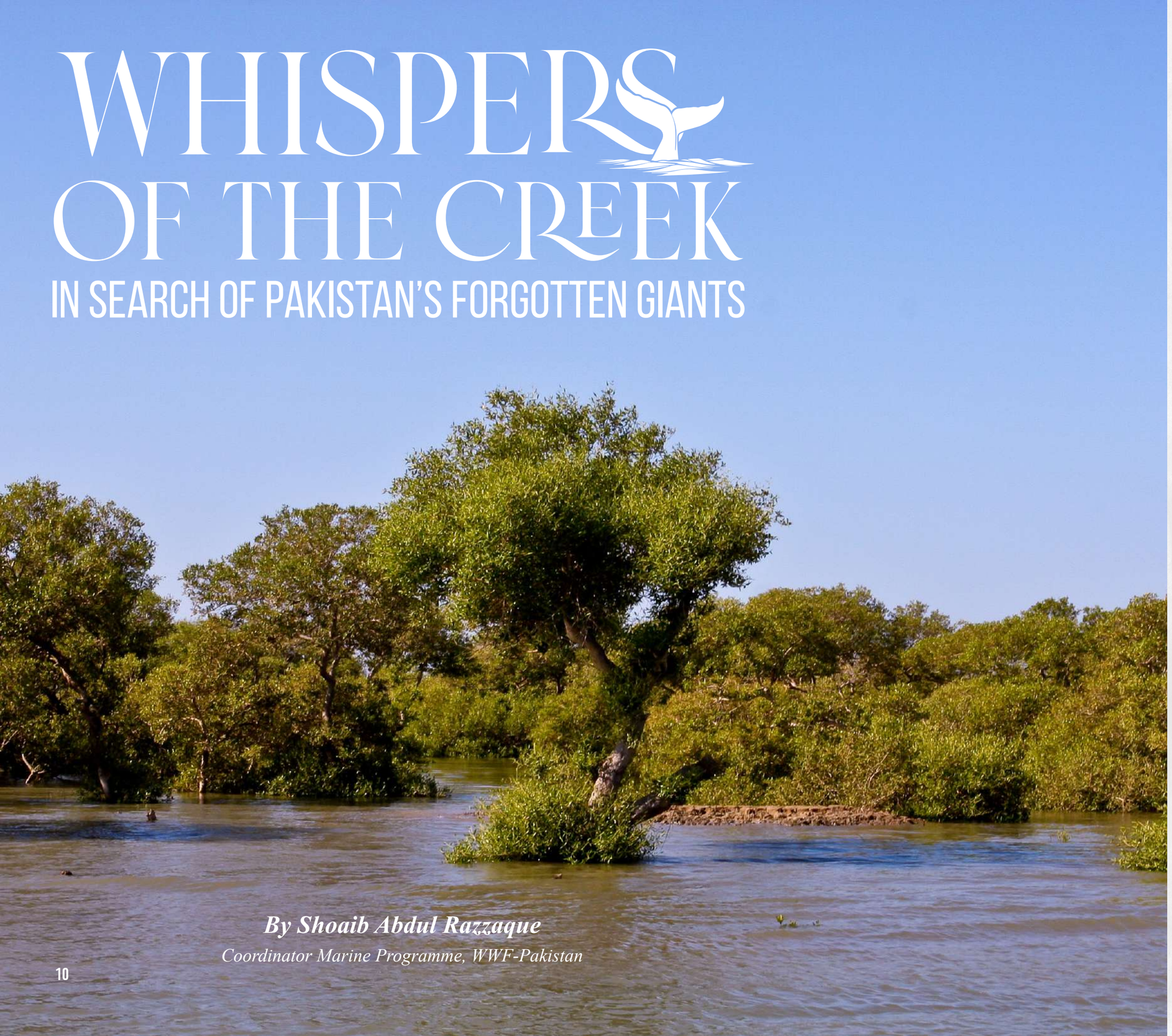
Islamabad, with over two million residents, continues to expand. Yet the leopards persist. Despite their remarkable adaptability, common leopards in Islamabad face numerous threats: habitat loss and fragmentation due to unchecked development, illegal construction and encroachments within protected areas, and conflict with humans when livestock is lost. While poaching has decreased, it remains a threat, as does prey depletion from overhunting and habitat degradation. Climate change, too, casts a long shadow bringing droughts that dry up water sources and reshape the ecosystem. Without sustained conservation efforts and strong policy enforcement, these pressures could tip the balance, putting the future of Islamabad's leopards at risk.

The continued presence of leopards in Islamabad is a symbol of resilience, adaptation, and hope. As the city grows and the pressure on natural spaces intensifies, the Margalla hills remain a green fortress, safeguarding not only leopards but the wild heart of Islamabad. By nurturing this coexistence and investing in community awareness, habitat protection, and scientific research; Islamabad can serve as a rare and powerful example: a modern city where wildlife is not an afterthought, but a living, breathing part of the landscape.

Let the leopards remind us that we are not alone in our cities. We share our world with claws and paws, wings and hooves, and the future of our coexistence lies in our hands.

WHISPERS OF THE CREEK

IN SEARCH OF PAKISTAN'S FORGOTTEN GIANTS



By Shoaib Abdul Razzaque

Coordinator Marine Programme, WWF-Pakistan

In the vast breathless silence where land meets the Arabian sea, the Indus delta unspools - a living, shifting tapestry of silt, mangroves, and water. In 2013, we came to this place under the banner of the Fisheries Resource Assessment Project (FRAP), tasked with tracing the invisible pulse of Pakistan's coastal ecosystems. Our teams, divided into two groups, moved like shadowed reflections: one cutting through the creeks from Korangi to Keti Bunder, the other Keti Bunder to Khajar and Khar creeks, day after day, mapping a world few had ever truly seen.

Here, survival dictates a different set of rules - rules we learned to follow with the respect owed to ancient things.

Among these, one stood above all: no sailing after sunset.
As dusk descends, the delta becomes treacherous. Beneath the opaque water, set nets stretch unseen, waiting to ensnare the unwary. An entangled propeller could strand us in the gathering dark, forcing a dive into murky waters where every movement is blind, every moment a risk. So, before the light drained from the sky, we sought shelter - a ritual born not of caution, but of necessity.

In September 2013, we found ourselves nearing the wide mouth of Wadi Khudi creek. Unlike the narrow, silt-choked channels we usually navigated, Wadi Khudi opened like a secret offered only to those who knew how to find it - deep, still, and breathing with the pulse of the open sea beyond.

On the bank, silhouetted against the fading gold of the evening, stood a small house. It was nothing more than two rooms without walls, open to the air, defiant in its simplicity. In these remote places, structures are not homes but sanctuaries, fragile bulwarks against the untamed vastness.

Customs demanded we respect such sanctuaries. We anchored at a respectful distance, mooring the boat in the eight-metre-deep channel, and made our way to shore, pulling ourselves hand over hand along a rope, the water cool and heavy around us.

A dog lay tethered nearby, its eyes reflecting the last light of the day. In these isolated stretches of the delta, dogs are not pets but guardians. This dog, curiously, did not bark as we approached. It watched, silent, unmoving.

As we settled onto the dry patches of mud and grass, the world around us seemed to hold its breath. The creek at dusk is a place of extraordinary quiet - a silence so complete it hums in your ears.

And then, the silence broke.

From the far side of our vessel came a sound - a splash, deliberate and heavy, followed by a ripple that spread outward in the growing darkness. We turned, peering into the gloom, but the light had drained from the world, and the creek was a sheet of shifting shadows.

We saw only the faintest suggestion of movement - darker shapes against dark water.

At the same moment, the dog sprang to life. It lunged against its tether, barking furiously, not at us but at the water. Its sudden frenzy was as shocking as the splash had been. In a place where silence is survival, such outbursts are rare and unsettling. We stood motionless, every sense straining. The dog barked and barked, its voice sharp against the heavy air. The water stirred again - a patch of turbulence 10 or 15 metres wide, rippling and boiling as if something vast moved just beneath the surface. For long minutes we waited, caught between the urge to flee and the need to understand.

Then, as suddenly as it had begun, the disturbance ceased. The dog fell silent. The water smoothed itself into darkness. We retreated to the boat cautiously, pulling ourselves back aboard along the same rope, speaking little, each man folding the mystery into the quiet of his thoughts.

With the first light of morning, the delta reassembled itself - mist clinging to the water, blurring the world into a dream of grey and silver. The fishermen in the house were stirring, preparing their small boat, not for fishing but to fetch fresh water, a daily journey that spoke of the quiet struggles woven into life here.
We approached them, shared our strange story of the night before. Their reaction was measured, unhurried.

"It could have been a small whale," one of the elderly men said, shrugging as if such events were part of the expected rhythm of life. They explained that Wadi Khudi, with its deep, open mouth, sometimes played host to visitors from the sea. Whales, they said, occasionally strayed into the broader creeks, following prey or currents. Rare, but not unheard of. Their acceptance of the extraordinary as ordinary stayed with me.

In these forgotten places, local knowledge holds truths that science often overlooks. And perhaps, I thought, they understood more about these waters than we ever could.

BELIEFS THAT GUARD THE SEA

As our survey days unfolded, so too did the stories of the fishermen. In the hours between tasks, in the brief conversations exchanged at jetties and landing sites, we learned that conservation was not always written into law. Sometimes, it was etched into memory and faith.

Most fishermen insisted they did not deliberately catch dolphins or sea turtles.

It wasn't about market value - dolphins held none - but about something older, deeper. They told of how dolphins were seen as blessed beings, sometimes believed to be humans transformed by divine will. Many linked this belief, however loosely, to the story of Prophet Yunus (Jonah) - a testament to the enduring influence of religious narratives in environmental stewardship - whose salvation by a giant fish is a tale woven deep into Islamic tradition.

Though the details blurred with time and translation, the message was clear: harming these creatures was a sin. It would anger the sea, sour their fortunes, and curse their nets.

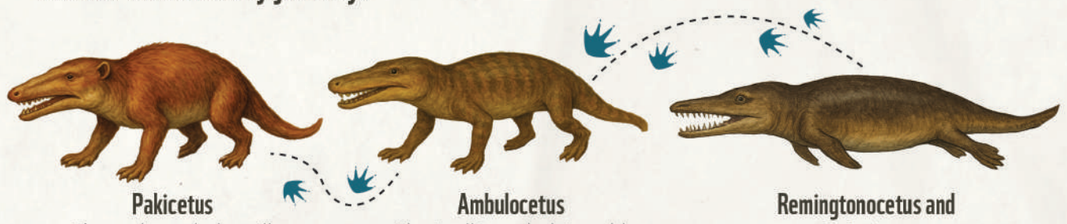
"We take what God gives," the elderly fisherman said. "If we harm His creatures, the sea will turn its back on us." This blend of faith, folklore, and practical wisdom acted as a quiet, powerful shield, protecting the marine life that science now struggles to save. Today, the fight to save what remains is fierce but fragile. The Indus canyon has been recognized as an Important Marine Mammal Area, a sanctuary for the scattered survivors of a once-mighty lineage.

That night by Wadi Khudi creek, I felt the weight of a story much older than our own - a story of life, loss, and endurance. The fishermen, with their simple boats and ancient beliefs, are the stewards of that story. They guard it not with laws and papers, but with memory and respect. Somewhere beneath the surface, the last whispers of Pakistan's whales roll through the dark waters, calling not for attention but for remembrance.

If we listen - truly listen - we might just find the wisdom to answer.

THE HIDDEN CETACEANS OF THE DELTA

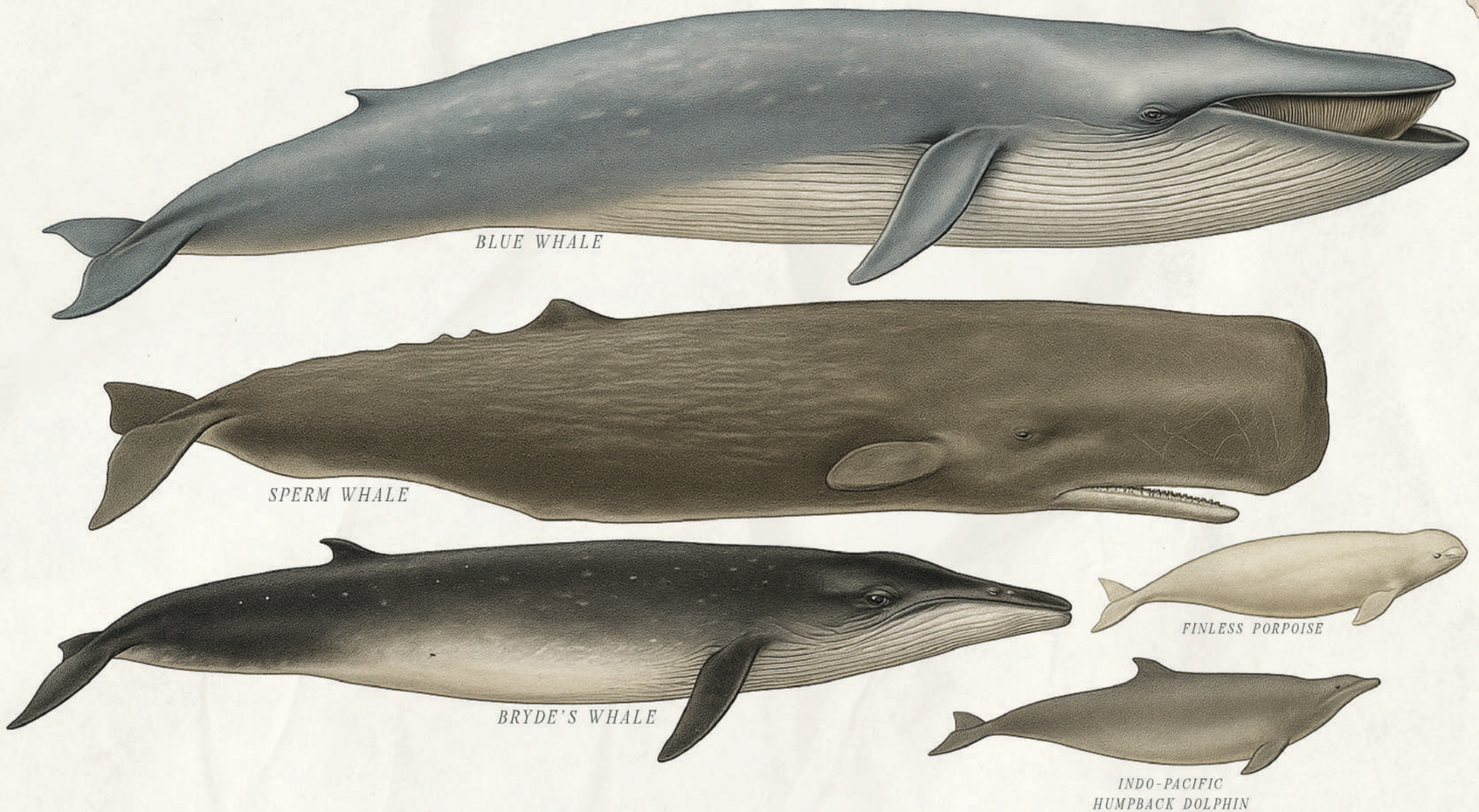
From ancient seabeds in Kala Chitta and Balochistan, fossils tell the story of whales' evolutionary journey:



Pakicetus
The earliest whale, still walked on land

Ambulocetus
The "walking whale" could move between land and water

Remingtonocetus and Dalanistes
Coastal hunters that roamed prehistoric seas



MEET THE ARABIAN SEA HUMPBACK WHALE

Genetically Distinct:
Separated from other humpbacks for ~70,000 years

Non-Migratory:
One of the only humpback populations that don't migrate

Critically Endangered:
Fewer than 100 individuals remain

Distribution:
Once ranged from Oman to Pakistan, now rarely seen

DID YOU KNOW?

- The Indo-Pacific Humpback Dolphin is shy and pale, gliding through the Indus Delta's murky waters.
- The Finless Porpoise silently slips through the mangroves, rarely seen but always present.
- Farther offshore, the deep waters of the Indus Canyon once teemed with Bryde's whales, sperm whales, blue whales, and Arabian Sea humpbacks.
- The Indus Canyon is now recognised as an Important Marine Mammal Area (IMMA).
- Occasionally, Bryde's whales and sperm whales return.
- Arabian Sea humpback whales—the rarest of their kind—still roam in the sea.

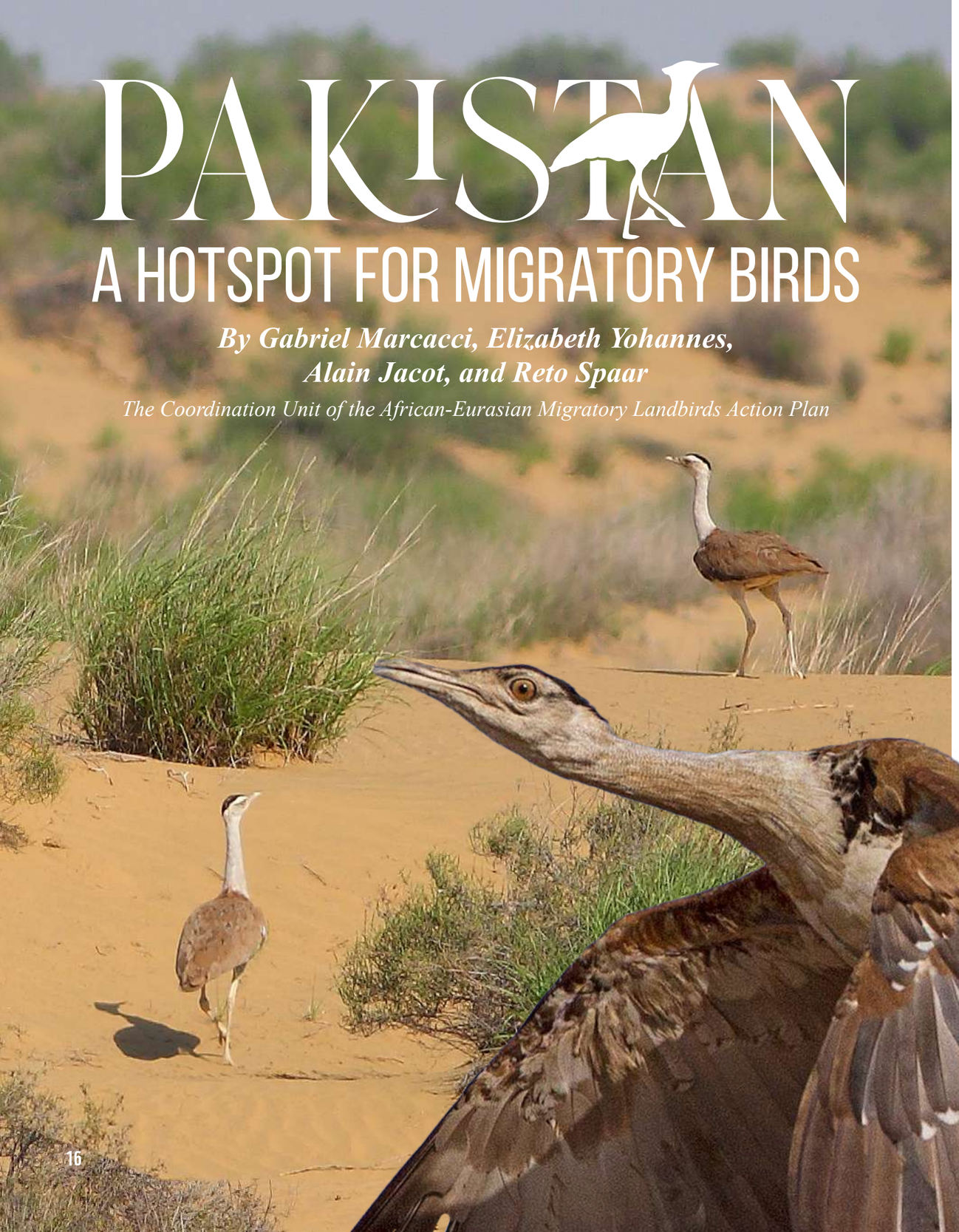
WHY IT MATTERS

Understanding and protecting Pakistan's marine mammals is not just about saving species — it's about preserving our deep natural heritage and restoring balance to ecosystems that support people, wildlife, and climate resilience.

PAKISTAN
A HOTSPOT FOR MIGRATORY BIRDS

By Gabriel Marcacci, Elizabeth Yohannes, Alain Jacot, and Reto Spaar

The Coordination Unit of the African-Eurasian Migratory Landbirds Action Plan



Every year, billions of migratory birds travel thousands of kilometres across the globe between their breeding and non-breeding grounds.

Some of them pass through, stay or even breed in Pakistan as they journey across continents, crossing natural barriers such as mountain chains, deserts and seas, and stretching from the steppes of Central Asia to the savannahs of Sub-Saharan Africa.

Pakistan occupies a special place on the global map of bird migration (see Fig.1), as it lies at the intersection of several major migratory routes that connect Europe, Asia and Africa.

Some migratory birds briefly stop to rest and feed before continuing their journey, while others stay during the boreal winter in Pakistan's forests, wetlands, agricultural fields and urban green spaces. This makes the country not only an important transit point and seasonal home for many migratory landbird species such as the Bluethroat, the European Roller or the Black-headed Bunting, but also a region of high responsibility for their conservation.

These migratory birds remind us that nature connects us – across countries, continents, and cultures – and our ability to coexist with them is vital for their survival, both locally and globally.

Figure 1:
Pakistan lies at the intersection of several migratory routes that connect Europe, Asia and Africa.

Bluethroat
Luscinia svecica
The Bluethroat migrates from Central Asia to Pakistan.

European Roller
Coracias garrulus
The European Roller stops in Pakistan on its journey from Central Asia to Africa.

Black-headed Bunting
Emberiza melanocephala
The Black-headed Bunting flies from Eastern Europe to Pakistan.

The presence of these migratory landbirds is not just a seasonal spectacle, as many of them play an important role for the functioning of natural ecosystems and provide vital ecosystem services such as pest control, seed dispersal and pollination. A single barn swallow, for example, can consume hundreds of insects in a day, helping reduce the need for chemical pesticides, while fruit-eating species such as the black-throated thrush are spreading seeds and fostering forest regeneration.

In both rural and urban landscapes, these birds quietly contribute to the health of ecosystems on which people depend.

Yet, despite their presence in people's everyday lives, migratory landbirds often remain unnoticed. The small birds flying around farmlands may support agriculture by helping control insect pests, though this valuable role is not always widely recognized. Children may imitate their songs without knowing these birds have journeyed thousands of kilometres from Siberia or Central Asia. In literature and folklore, birds like cuckoos or swallows carry symbolic meaning and their seasonal presence marks the passage of time and change.

This lack of awareness of migratory landbirds makes them vulnerable, but recognizing and celebrating their presence can help foster greater appreciation and protection for these remarkable travelers.

Migratory landbirds are indeed among the most threatened bird species globally. They are particularly vulnerable because they depend on good-quality habitats that provide food, shelter and nesting opportunities throughout their annual cycle.

Just like in their breeding grounds, their stopover sites and winter homes are increasingly at risk due to deforestation, pollution and rapid changes in land use. The widespread use of pesticides in agriculture can reduce insect populations and poison both their food sources and the birds themselves.

Furthermore, many birds die by colliding with illuminated window fronts on modern buildings or powerlines, or because of illegal hunting, poisoning or trade. Climate change yet adds another layer of difficulty: shifts in weather patterns mean that birds may arrive in places where their food is no longer available or where nesting conditions have changed. Their dependency on multiple habitats across vast and often geographically and politically distinct regions makes their conservation challenging and complex.

These challenges cannot be addressed by any one country alone and their protection requires strong international cooperation and shared responsibility across borders.

The African-Eurasian Migratory Landbirds Action Plan (AEMLAP) – an instrument under the Convention of Migratory Species (CMS) aims to promote collaborative conservation efforts across the migratory landbird flyways. Calling on countries to work together to safeguard migratory birds and the services they provide, the Action Plan covers all important aspects, from habitat restoration and sustainable land-use practices to research and monitoring, education, awareness and policy. Pakistan is well positioned to play a key role in this context due to its strategic geographic location and its active engagement in global conservation efforts.

A notable example of this commitment is the first international workshop on the development of a Multi-species Action Plan (MsAP) for bustards, held on 14 April 2025 in Islamabad and hosted by WWF-Pakistan.

This workshop successfully brought together experts from around the world to develop a unified approach for conserving all 26 bustard species globally. More than just a technical milestone, it marked the emergence of a growing alliance dedicated to protecting migratory and threatened birds—through science, policy, and above all, cooperation. Such initiatives underscore the essential role that countries like Pakistan can play, not only as custodians of critical stopover and wintering habitats, but as champions of coexistence in a rapidly changing world. The commitment to safeguard migratory birds is not just an ecological necessity, it is a reflection of how we choose to live with nature.

As we reflect on the theme of coexistence, migratory landbirds remind us that our connections extend far beyond borders. Their epic journeys are possible only when healthy landscapes and human communities exist in harmony. Their presence enriches our ecosystems, our agriculture, and our culture.

To ensure that these birds continue to grace Pakistan's skies for generations to come, we must match their resilience with our resolve—offering protection, partnership, and a place to belong along their journey.

BRINGING THE BIRDS BACK TO BORITH LAKE

By Sarosh Ibrahim

Senior Officer Communications, WWF-Pakistan.

Nestled between the Chulkin and Passu glacier, the Borith lake is marked as a vital spot for migratory birds. These birds play an essential role in regulating insect and fish populations, providing a natural balance that benefits both agriculture and ecosystems.

There is a strong relationship between protection of migratory birds and the well-being of humans.

Each year, thousands of birds migrate along the Indus Flyway, one of the world's oldest bird migration routes. Stretching from Siberia across the Karakoram, Hindu Kush, and Sulaiman ranges, this path traces the length of the Indus River down to its delta. These seasonal migrations help bridge the gap between human needs and nature's quiet resilience.

Of the 300 species recorded in the region, over 200 species have been observed at Borith lake.

The rugged landscape shelters an astonishing variety: alpine species like the snow cock, raptors, water birds, perching birds and songbirds.

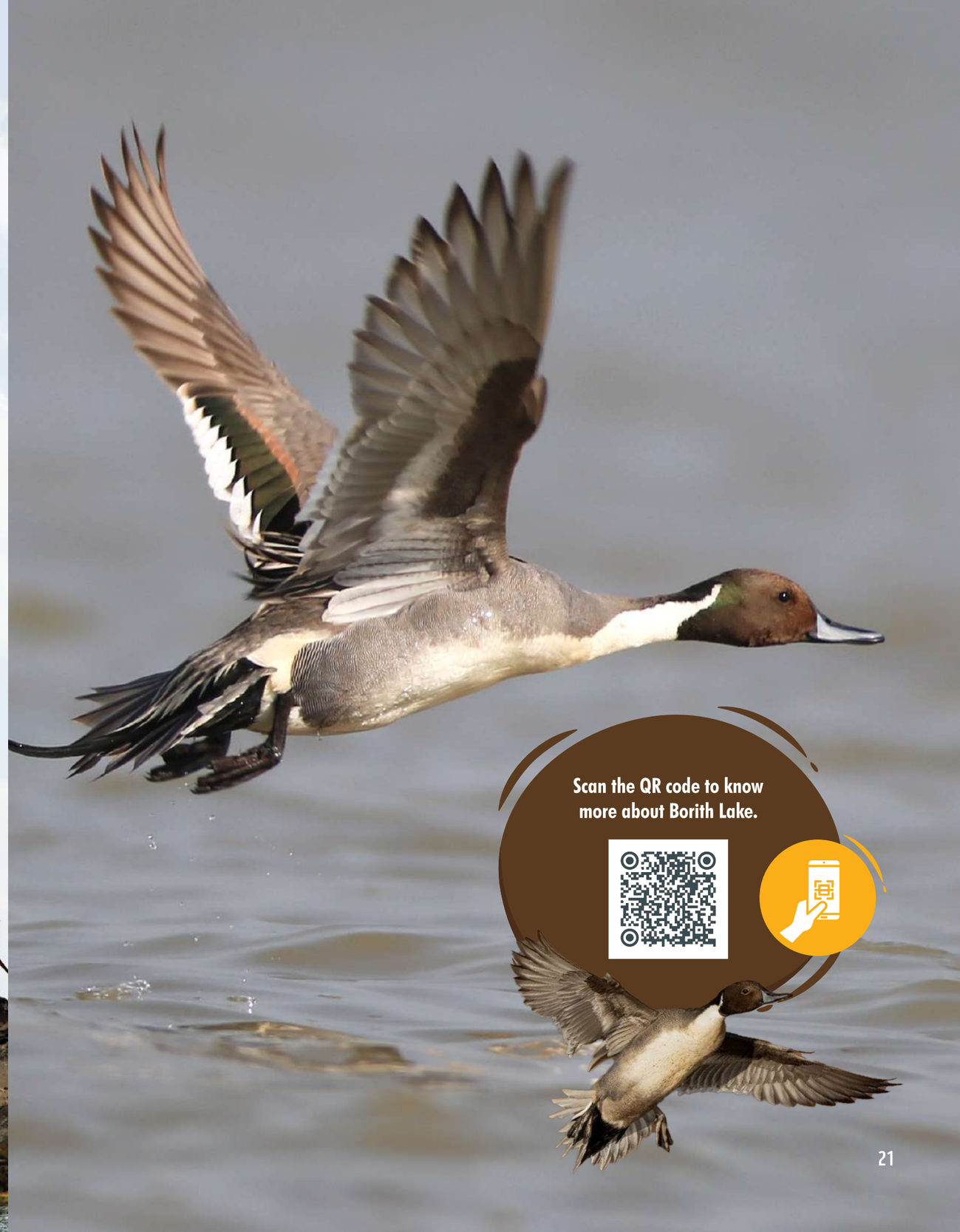
But this wasn't always the case.

In the past, Borith was known more as a hunting ground than a haven. Local and visiting hunters targeted ducks, cranes, and raptors, leading to the alarming decline of several species, including the white-eyed pochard, marbled teal, and garganey. Hunting was not the only challenge, migratory birds across Pakistan continue to face threats such as habitat loss, wetlands degradation, pollution and illegal wildlife trade.

Bridging the gap between awareness and community-driven action, WWF-Pakistan encouraged local communities to take the lead in wildlife conservation by supporting a ban on hunting.

Through collective and conscious efforts, Borith lake began to transform, not only into a safer place for wildlife but also into a symbol of harmony between people and nature.

Today, Borith lake stands as a symbol of successful conservation through community stewardship. The return of once-rare migratory birds has not only enriched local biodiversity but also strengthened the community's connection with nature and positioned the lake as a model for responsible tourism and ecological restoration.



Scan the QR code to know more about Borith Lake.

WILD LEGENDS OF PAKISTAN

وائلڈ لیجنڈز آف پاکستان

By Shahgan Butt

Coordinator - Digital & Brand, WWF-Pakistan.

Throughout history, wildlife and ecosystems have been intricately woven into the cultural fabric of Pakistan. The relationship between animals and humans is deeply embedded in faith, mysticism, and tradition. The folklore surrounding various species serves as a reminder of how closely human lives and nature are intertwined.

Wildlife species are integral to both the cultural heritage and ecological health of Pakistan. Read these unique folklore stories that illustrate how nature influences the customs, values and livelihoods of communities across the country.

These stories are more than just cultural memories, they are bridges to the wild. They remind us that coexistence with nature is not a new idea, but one deeply rooted in who we are. In reviving and retelling these tales, we can reconnect with the wisdom of the past — and find direction for a more balanced, sustainable future.

HOOPOE

THE DIVINE MESSENGER

Known as hudhud in Arabic, the hoopoe holds a sacred place in Islamic tradition and is celebrated as a messenger in the story of Prophet Solomon (Hazrat Suleiman) and the Queen of Sheba. As a solar symbol in Mediterranean and Middle Eastern cultures, representing the sun's power, vitality, and life-giving energy, it was also often associated with kingship, filial piety, and wisdom. Its body was believed to possess potent magical and medicinal properties. Its role in folklore highlights the deep cultural respect for wildlife.

BLACKBUCK

THE BELOVED COMPANION

The Mughal Emperor Jahangir, known for his love for hunting, shared a unique bond with an antelope named Mansraj. During a tragic hunting outing, Jahangir accidentally caused the death of his beloved companion. He constructed the 100-foot-tall Hiran Minar as a tribute to Mansraj, a monument that reflects the deep emotional connection between humans and the animals they cherish.

PALLA

THE BLESSED FISH

The palla machli, or hilsa fish, holds spiritual significance in Sindh, not only as a beloved food but also as a revered symbol in local folklore. It is said that the palla begins its journey from Thatta as a black fish, but upon passing the Zindapir shrine in Sukkur, it transforms into a shimmering silver fish with a distinctive red spot, its flavour and fragrance enriched by the blessings of the saint. Fishermen from the Mohana tribe believe that the palla is a devoted follower of Khawaja Khizer, who protects and guides travelers.

BHULAN

THE RIVER'S PROTECTOR

For generations, the Indus blind dolphin, or Bhulan, has been surrounded by myths and legends. Some believe the Bhulan is a woman transformed into a river dolphin by a holy man's curse after she forgot to feed him. Others speak of its connection to the river, claiming that wherever it appears, a small island will form. Among the indigenous fishing communities along the Indus river, however, the Bhulan was long referred to as a "balla," which in Sindhi loosely translates to "a dangerous, often snake-like creature." This misconception painted the dolphin as vicious, leading to it being hunted, attacked, and even killed. These myths, while reflecting the deep cultural significance of the dolphin, also highlight the complex relationship between humans and wildlife, marked by both reverence and conflict. Today, conservation efforts aim to debunk harmful myths and reframe the Bhulan's image as a guardian of the river and a symbol of ecological and cultural heritage.

PANGOLIN

THE GUARDIAN OF LIVESTOCK

In Azad Kashmir, a fascinating myth surrounds the pangolin, believed to possess protective powers. It is said that if the scales of a pangolin are hung around the neck of a cow or buffalo, the animal will never lose its fertility, and its calf will be safeguarded from wild animal attacks. This belief underscores the deep cultural connection between wildlife and agriculture, where the preservation of certain species, such as pangolins, snakes, or even barn owls, is seen as essential to the well-being of livestock and local farming communities.

GHARIAL

THE RIVER'S SOLDIER

The gharial has deep roots in ancient civilizations and folklore. Revered as a symbol of fertility, wisdom, and protection, the gharial features prominently in the mythology and cultural heritage of South Asia, particularly in the Indus Valley Civilization and in Hindu and Buddhist traditions. In ancient Indian texts, the gharial is often associated with rivers and water deities. It is depicted as the vahana (vehicle) of Goddess Ganga, the divine personification of the Ganges river, symbolizing the life-giving and purifying powers of water. In Pakistan, the gharial, once a symbol of the country's rich aquatic heritage, is now considered locally extinct. While recent sightings offer a glimmer of hope for its potential return, we have a long way to go in turning this dream into a reality! Its presence in these waters reminds us of the sacred connection between the river's health and the well-being of surrounding communities.

SNOW LEOPARD

THE GHOST OF THE MOUNTAINS

The snow leopard known as the 'Ghost of the Mountains', with its elusive nature and ability to camouflage into the rugged mountains, is often seen as a shape-shifting mountain spirit in local folklore. Its stealth and rare sightings have led many to believe the snow leopard as a guardian spirit of the highlands, protecting the sacred lands from harm. This legendary reverence highlights the snow leopard's importance in the delicate balance of mountain ecosystems and its role as a symbol of the untamed wilderness.

CETACEANS

THE SACRED GUARDIANS

Among coastal fishing communities in Pakistan, dolphins and whales are deeply revered as protectors of the seas. They are believed to bring good luck, guiding fishermen to safety and even helping drive fish toward their nets. However, accidentally catching a cetacean in a fishing net or finding a dead dolphin or whale near the shore is seen as a grave misfortune, symbolizing storms, bad luck, or disrupted marine balance. These beliefs underscore the cultural reverence of cetaceans as 'guardians of the sea' and highlight their vital role in maintaining healthy marine ecosystems.

HONEYBEES

THE KEEPERS OF PROSPERITY

In Kalasha mythology, honey bees symbolise prosperity and good luck, and every household in the Kalash community keeps bee hives. Revered for their cultural significance, bees are also vital pollinators and support agricultural productivity. The Kalash people's protection of honey bees highlights the interconnectedness of wildlife, agriculture, and culture.

PEACOCK

A SYMBOL OF PROTECTION

Peacock feathers hold a special place in Pakistani culture, cherished as symbols of protection that can ward off the evil eye and bring harmony into homes. Beyond their decorative appeal, these feathers are steeped in spiritual significance. In Sindh, where peacocks are often associated with Hindu culture, they are considered sacred and are linked to Lord Krishna, who is traditionally depicted with a peacock feather in his crown. This reverence has helped protect the species in certain areas, as harming or hunting peacocks is seen as an act of disrespect to cultural and religious traditions.

MARKHOR

THE SERPENT SLAYER

The markhor, a majestic goat with spiralling horns and the national animal of Pakistan, is surrounded by folklore that enhances its cultural significance. According to legend, the markhor possesses the ability to kill snakes and chew their venomous remains. As it grinds the poison, foam forms in its mouth and drips onto the ground, believed to neutralize the venom and purify nearby water sources. This gave the markhor a sacred reputation among local communities, symbolizing its role as a guardian of the ecosystem. The name markhor itself means "snake-killer" in Persian and Pashto, inspired by these mythical powers. In reality, the markhor is a herbivore, grazing on grass, leaves, and shrubs along mountain slopes and cliffs. It symbolises resilience, reflecting the strength needed to navigate harsh terrains and the spirit of the people who call the rugged landscapes home.

WILD PIGEON

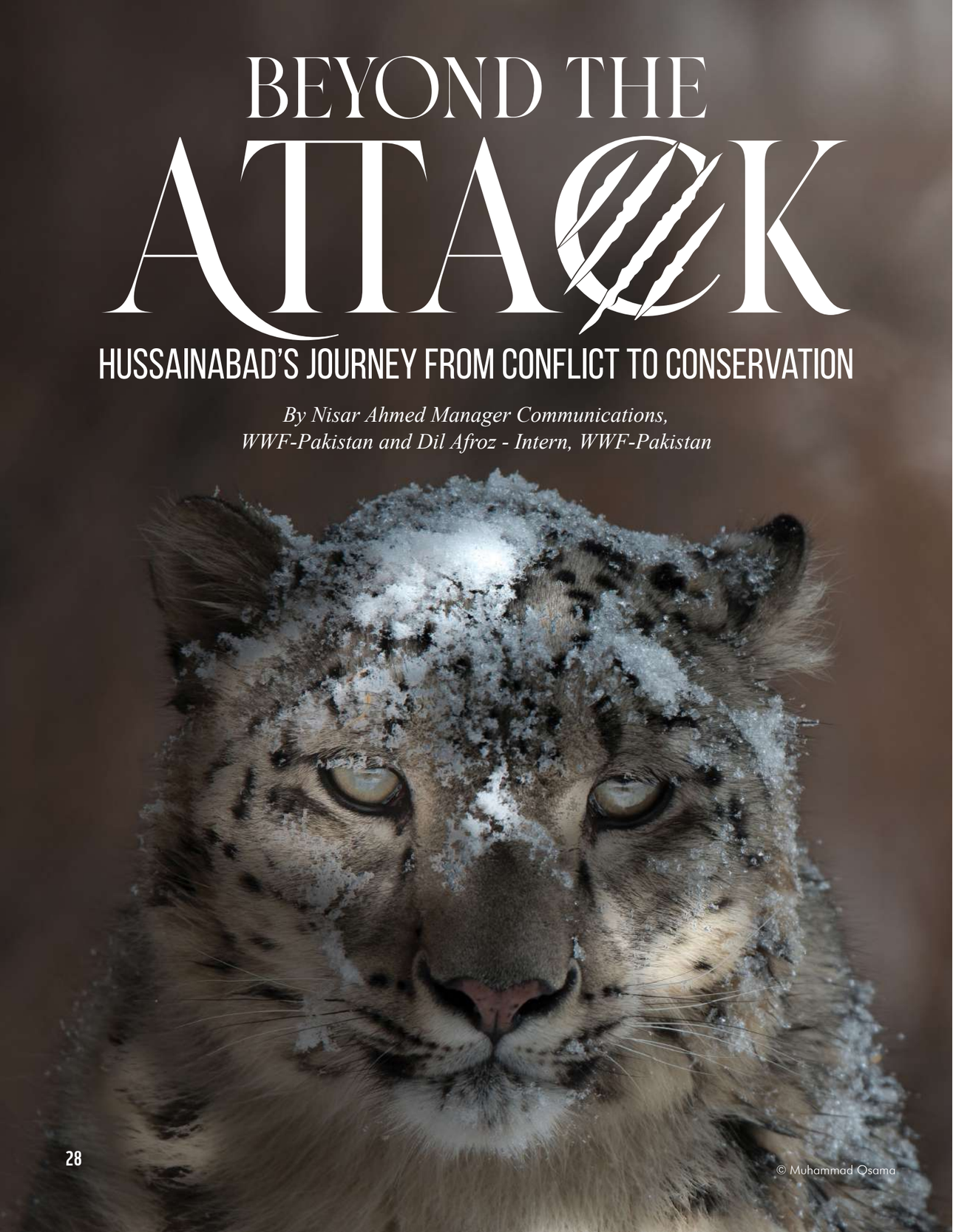
THE SYED BIRD

The wild or rock pigeon is considered a Syed bird in Pashtoon areas of Balochistan, and hunting it is strictly prohibited. Revered for its sacred status, this bird is seen as a symbol of respect and protection. The prohibition against harming it highlights the significance of protecting species that hold cultural and spiritual value.

BEYOND THE ATTACK

HUSSAINABAD'S JOURNEY FROM CONFLICT TO CONSERVATION

By Nisar Ahmed Manager Communications, WWF-Pakistan and Dil Afroz - Intern, WWF-Pakistan



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Tucked away in the remote Skardu district of Gilgit-Baltistan, Hussainabad is a small mountain village where generations have lived in deep connection with the land. Life here is shaped by the towering Karakoram ranges and harsh terrain, and the community has long relied on traditional agro-pastoral practices to survive. Surrounded by snow-capped peaks and wild landscapes, the people of Hussainabad depend on livestock not just for their livelihoods but for their security and survival. In a place where economic opportunities are limited, animals like goats, sheep, and yaks serve as living assets, a way for families to store value and safeguard their future.

For these people, living so close to nature comes with its own set of challenges.

Hussainabad lies on the edge of one of the world's most elusive big cat territories, the natural habitat of the snow leopard. This iconic yet vulnerable predator roams the high-altitude landscapes of the Karakoram, perfectly adapted to the steep, snowy terrain. Every winter, as heavy snowfall drives prey animals to lower elevations, snow leopards also descend in search of food.

While their presence is a sign of a healthy mountain ecosystem, for the villagers of Hussainabad, it brings a season of tension. With livestock forming the backbone of their economy, the threat of snow leopard attacks becomes very real.

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Local folklore speaks of a snow leopard that returns each winter, preying on livestock and disappearing into the night, like a ghost of the mountains. Unfortunately, this story isn't just a myth.

One bitter winter night, this tale became a grim reality. In the remote village of Hussainabad, a snow leopard descended from the mountains and launched a swift, deadly attack on livestock. Slipping into the village under cover of darkness, the elusive predator broke into animal pens and killed or injured several animals within hours. When dawn broke, the villagers were devastated. Their pens were torn apart, their animals lay lifeless, and their hopes for the season had vanished.

For many, the loss wasn't just financial, it was deeply personal. These animals had names, played essential roles in daily life, and were the very foundation of household security and survival.

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In the aftermath of the attack, the village gathered for an emergency meeting. The atmosphere was tense, heavy with grief and frustration. Some, overwhelmed by anger, demanded that the snow leopard be hunted down and killed. Others directed their outrage at the Wildlife Department, accusing it of negligence and failure to protect the community. The discussion dragged on.

But amid the noise, an elder slowly stood up, someone known for his wisdom and quiet observation. His voice was calm, yet firm, and it cut through the tension in the room.

He urged the villagers to pause, to look beyond anger and think about what had truly driven the leopard into their midst. He spoke of the mountains he had known all his life, where ibex and other wild prey once roamed freely across the cliffs and meadows. Now, he said, those animals had become rare, hunted to near disappearance.

He asked the villagers to consider: if the snow leopard's natural prey was gone, what choice did it have? Its presence in the village wasn't just an act of aggression, it was a sign of imbalance.

The elder's words hung in the air, shifting the mood from anger to reflection. Spurred by this insight, the villagers took it upon themselves to investigate. What they found confirmed their fears, unregulated hunting of ibex had dramatically reduced the species' numbers.

The decline in natural prey had disrupted the balance of the ecosystem, pushing snow leopards closer to human settlements.

Instead of seeking revenge, the villagers chose a different path: one of coexistence. They came together to form a community-led conservation committee, united by the decision to protect the region's fragile ecosystem. One of their first actions was to ban the hunting of ibex, a key prey species for the snow leopard.

The ban wasn't just symbolic — it came with strict enforcement. Anyone caught hunting would face fines and be reported to the authorities, no exceptions.

Over time, the results of this bold choice became clear. With less pressure from hunting, ibex slowly started returning to the cliffs and slopes around the village. And as wild prey became more available, the snow leopard turned back to the mountains, away from livestock.

Attacks on animals dropped noticeably, and with that, the fear that had gripped the community each winter began to ease.

Beyond simply preventing conflict, this shift brought new opportunities. With healthy wildlife populations, the community introduced a regulated trophy hunting model under government oversight.

Revenues generated from this model were reinvested into the village supporting education, healthcare, and local infrastructure. Livestock management also improved. New, secure corrals were built with stronger materials and better designs to withstand predator attacks.

The villagers began to see themselves not as victims of nature, but as its stewards. Their relationship with the snow leopard, once marked by fear and conflict, transformed into one of respect and responsibility.

Today, Hussainabad stands as a powerful example of what can be achieved when communities embrace coexistence over conflict.

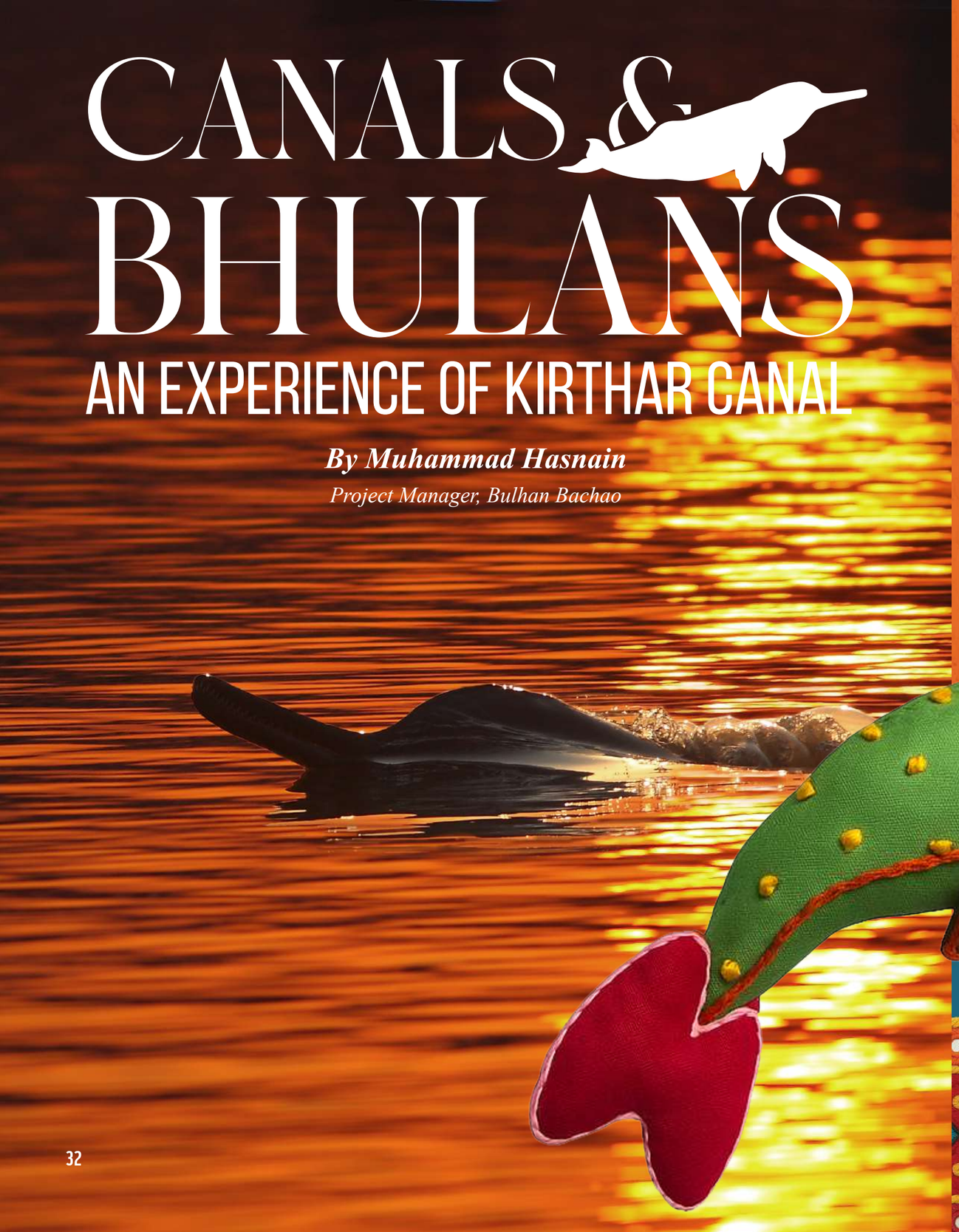
In this remote corner of Gilgit-Baltistan, a village that once mourned the loss of its livestock now celebrates a renewed bond with the wild and offers hope to other communities facing similar challenges.

CANALS & BHULANS

AN EXPERIENCE OF KIRTHAR CANAL

By Muhammad Hasnain

Project Manager, Bulhan Bachao



In August 2023, an Indus river dolphin—Bulhan in Sindhi and Saraiki—died in the village of Ahmed Khan on the banks of the Kirthar canal in the district of Usta Muhammad, Balochistan. The story goes that someone shot her upstream a few days earlier. She healed, moved downstream, and was caught by a young man who had seen a Facebook video about the Indus dolphin. He took the dolphin out of the canal and placed her in a small pond.

The news spread quickly, and people came to see her, including several government officials. With each new special or high-ranking visitor, the young dolphin was taken out and held for pictures. Tragically, she died—likely from overexposure or a heart attack.

Indus river dolphins are very sensitive animals; being held, surrounded by noise, and constantly touched can cause them great distress.

It was this incident that birthed Bulhan Bachao, a human centered preservationist organization aimed at sensitizing communities along the many canals that branch off the Indus with the aim of ultimately creating a 'culture of care' and compassion for other living beings.

I was brought on as its first project manager and my first assignment was to visit the canal communities of the Kirthar canal in Balochistan. The Indus River dolphin is endemic to the Indus River system. Its population has made a remarkable recovery over the past few decades, following periods of severe decline.

The latest range-wide population abundance estimate, conducted in 2017 with the help of WWF-Pakistan, recorded approximately 1,987 individuals, additionally, a small sub-population of 34 individuals was reported between the Sukkur and Kotri barrages — we still have a long way to go.

What is the importance of the Kirthar canal? In 1932, the British built Sukkur barrage in upper Sindh, a massive project that changed the landscape of Sindh. From this barrage, seven major canals draw out billions of cubic feet of water to irrigate hundreds of thousands of acres of land across Sindh. Dolphins often get stuck in these canals. As the water levels decrease in the dry season the dolphins risk being killed by locals due to ignorance, getting accidentally caught in nets or simply dying from exposure.

I reached Usta Muhammad, on 10 September 2023 for a two day reconnaissance visit along with a small team. We stayed the night at the first village. At dinner, there was some discussion about politics, the Indus river, and Bulhan. Present were the chief of the village, his elder son, and two Kamdar.

Everyone was amazed to learn that the Indus river dolphin resembles human beings; it gives birth, has five fingers inside its flippers, and jumps out of the water to take in oxygen every two to three minutes.

The next day, we planned to visit the remaining villages along the canal. The chief sent his Kamdar to assist us. After half an hour, while we were crossing a small distributor of the Kirthar canal, the Kamdar, who was sitting in the back seat, told me something more horrifying than I could imagine. He said, "Around ten years ago, someone saw a Balla, a monster, in a distributor. He made a noise, and everyone ran home to grab their guns and started shooting blindly at the Balla. Finally, someone shot it down, and he was cheered.

We thought it was a crocodile or something dangerous, so we killed it. Last night, when you were showing the pictures of Bulhan, that story flashed back in my memory. I realized we did not kill a monster that day; we killed the Indus dolphin."

It made me sad, left speechless. After a few seconds, the Kamdar said, "Now we know. We will make sure it does not happen again." At that moment, I realized that a small conversation in a friendly environment can create empathy in people. Since most of the deaths of Indus dolphins occur in canals, engaging canal communities can make a huge difference.

After reconnaissance, we made necessary preparations for the rural outreach programme. We decided to show the audience a documentary film in the local language, Sindhi. Later on, a Balochi version was also developed in collaboration with Metaphor Productions. Besides, we took male and female volunteers on board to ensure the engagement of women in villages.

Finally, the day arrived. On the 5 December 2023, we began our activities in the first village. We showed the documentary film in the women's section first and then in the men's section. The film emphasized certain behaviors to follow when encountering a dolphin: do not touch it, do not bring it out of the water or place it in a pond, avoid making noise or taking pictures with it, and contact the Sindh Wildlife Department immediately.

The film was well received, and everyone enjoyed it. We held a question-and-answer session about the content of the film and tried our best to ensure the message was clearly understood. At the end of each programme, our team distributed animal toys to children to build their connection with these creatures and served food to everyone as a token of appreciation for their time.

For five consecutive days, we carried out our rural outreach activities in five villages. In these villages, we were able to convey our message to around 3,000 people, including children, youth, women, and elders.

The Rural Outreach Programme concluded with a medical camp organized with the help of Dr Imdad Khoso and his dedicated team. The objective was to provide some form of medical support to the people living along the canal, aligning with Bulhan Bachao's mission of caring for both human and non-human beings.

A wide range of health concerns were addressed during the camp. According to Dr Khoso, seasonal illnesses such as cough, flu, and waterborne diseases like malaria, dengue, typhoid, and skin allergies were common among the patients. The medical camp was well-equipped with a comprehensive assortment of medicines to address the prevailing health issues in the community.

The Rural Outreach Programme was a huge success for a nascent organization. After a year, in December 2024, I went back to those five villages to see whether our efforts had borne any fruit. We conducted a focus group discussion in villages which were focused on climate change, Indus river dolphin awareness, and the government's support structure.

Climate change is impacting their lives in several ways: rising temperatures—last year it reached 55 degrees Celsius—lower crop production, the spread of diseases, and water shortage. Secondly, people remembered the message we conveyed to them regarding the Indus river dolphin.

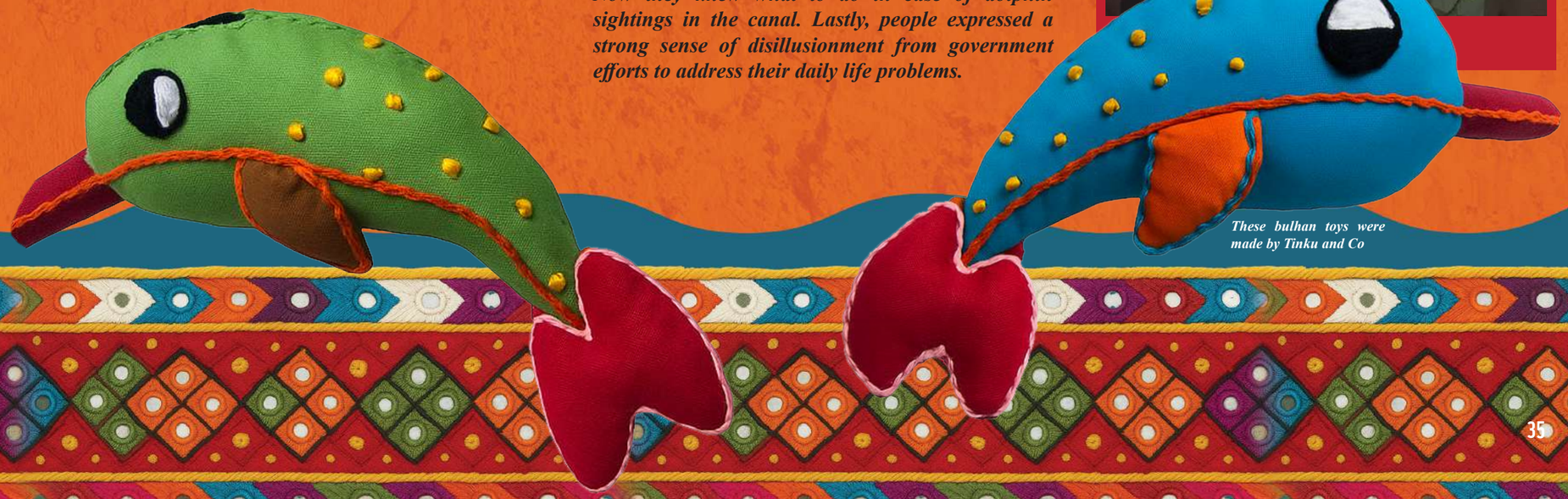
Now they knew what to do in case of dolphin sightings in the canal. Lastly, people expressed a strong sense of disillusionment from government efforts to address their daily life problems.

This whole experience taught me just how wide the rural-urban divide truly is. What we often take for granted in urban areas means a great deal to people in rural communities.

For example, watching a film on screen was a big deal for the villagers, and even receiving a free Panadol tablet was one of the happiest moments for some.

This experience is a powerful reminder that coexistence is not just about sharing space—it's about understanding, empathy, and respect. It also made me realize that placing human experience at the center of wildlife conservation can make a real impact. When we went to the people, talked to them, and provided some basic medical assistance, they were more than happy—and ready—to protect wildlife, including the Indus river dolphin.

We must engage communities, listen to their insights, and provide them with a support structure and basic knowledge. In doing so, they can become the first responders in preserving wildlife, especially the Indus river dolphin in the canals.



These bulhan toys were made by Tinku and Co

THE QUIET REVOLUTION IN NATHIAGALI

By Hassan Iftikhar

Marketing Manager at The City School

The smell of pines hung softly in the air, crisp, as the valley gleamed green and resplendent. The quaint village was as beautiful as I had imagined it to be. Only a meagre 30-minute ride downhill from Nathiagali's main bazaar. The road cascading downwards, to the village, was narrow, snaking its way downhill. Numerous natural springs gushed from the precipitous cliffs, paving the way for the water flowing downstream. These were sources of freshwater for all the local denizens living in the vicinity and surrounding villages.

The minivan that I was travelling in gyrated and swayed mercilessly as it chaotically wound down the rock-laden road. Soon, the valley opened up as we waddled downhill with lush green mountains sprawling into the horizon. The vehicle stopped, and Sajid Khan leapt forward with great alacrity to greet us. His energy was palpable as he took us into his humble abode.

I, along with WWF-Pakistan's team, sought to meet Sajid Khan, who is a revered and renowned wildlife conservationist who works for WWF-Pakistan. His reputation precedes his laurels and accolades as he is hailed as the "lion of the Galiat region" by everyone for his notable work for protecting leopards and their habitat, locally known as "Sher" in the area. The reason for our meeting was to learn about Sajid, up close and personal, to see him in his environment, and to get to know his mantra of conservation, given that he is seen as a pillar of resilience for nature conservation and a protector of common leopards.

"Coexistence is the cornerstone of my philosophy. It is something I've inculcated in my children and that I openly preach and teach everyone. The capacity to love, heal, and live with nature and all its inhabitants." Sajid stated as he directed us to enter his house. "This trophy here, my children got when they presented on wildlife at school," pointed out Sajid. "One presented on common leopards and the other on monkeys, and their conservation, and how they should be protected," as he explained the pertinence of wildlife, its protection, and the necessity to reduce human-wildlife conflict as we penetrate deeper into their natural environment.

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Sajid had books in his hujra (a seating place for guests) that were proudly displayed for all to see, inspect, and read. The purpose of which, according to him, was to start conversations about relevant topics regarding animals, wildlife, nature, and more. “These books are about wildlife and people are interested in them, including kids. Children read these books on wildlife, and my girls take them to school, and tell everyone that their father works for wildlife conservation, which is why many children have now developed an interest in wildlife. Mostly because of the visuals, subject matter, and pictures in the books.”

We entered their shed, adjacent to their living room, which had an open kitchenette as this roofed veranda gave way to the garden at the back of the house. Towering mountains sheathed in green could be seen as we were seated for tea. The mountains were speckled with colours of subtle hues, indicating houses in distant villages.

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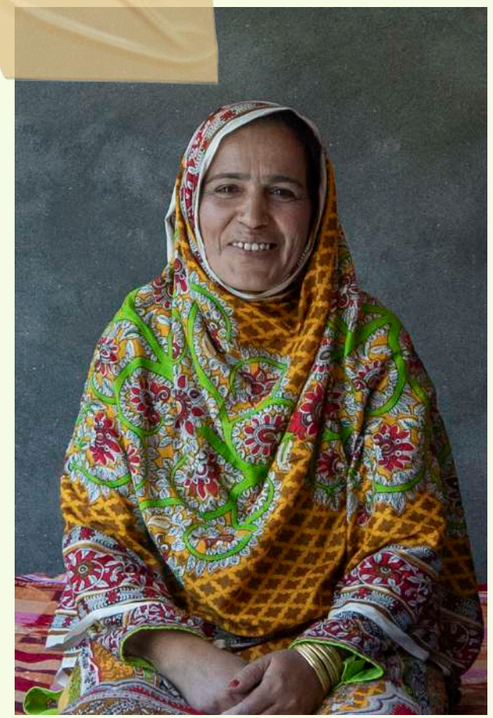
“This here is Waheeda”, a woman of slim stature, kind eyes, and a face beaming with a radiant smile, walked in with Sajid. He introduced his better half, and they both told us their story of being wildlife mavericks, of being non-conformists, who’ve managed to do what no one else has been able to do in terms of raising awareness about nature, animals, and wildlife. They’ve helped stymie local superstitions, rising above archaic customs and parochial mindsets by bringing in real change through education, wildlife awareness, actively pushing for co-existence with nature and wildlife, starting clean-up drives, and community service in their village.

“We work for people here and the community, and we’re very open. We’re forward-thinking folks. We talk to people, give interviews, and get pictures taken as well.,” added Sajid as they passed us hotly brewed tea and biscuits.



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Waheeda pressed us to have more tea and biscuits as she revealed she initially did not know much about wildlife and was mostly ambivalent about it. Through her husband's work and later her children's inherent passion, she is now part of the clan. "In our village, the wildlife that comes here is affected by man-made contraptions. For example, the monkeys that roam the area get electrocuted when they dangle from electric poles and wires. If we find an injured monkey, we bring it home. We have all the necessary equipment, like a first aid kit to treat and help the monkeys."

Waheeda revealed that she helped to treat one such injured monkey that they both let convalesce in their house, but sadly, after a month, it passed away by succumbing to its injuries.

Sajid and Waheeda are pivotal personalities in their community. Waheeda is a trained nurse who helps provide medical treatment, i.e., administering injections, local check-ups, etc., to anyone in the village who needs medical care.

She is a union councillor as well and works with the local madrassa to help bring structural change in the society. She particularly raises awareness and pushes the maxim of coexistence through the madrassa and its muftis, advocating for humans to live side by side with nature and wildlife.

"We do not kill anything here, whether it's a snake or insects. We teach our children that we always protect and leave them out in the open, since every living thing has value on this Earth. From waiting months to not renovate the kitchen since a pair of birds had constructed a nest above the kitchen cupboard space, to helping bring out a snake from a neighbour's house, just so it wouldn't be killed. People in our village are now very cognizant and aware of wildlife and why we should not resort to killing it," stated Waheeda, pointing to the nest precariously dangling above the kitchen cupboards on the wall.

Sajid added to Waheeda's story, "One day a scorpion came into the house and the mother had all these tiny ones on its back, which frightened me. My children were like, Mum, we're not going to kill them and I wondered what we could do. They picked it up on a piece of paper and let it out of the house." He added, "Children learn vicariously from you, and we have always tried to set an example for them and all the kids in the village"

Sajid, being an expert, is invited to schools to talk about wildlife conservation, its protection and how to reduce human-wildlife conflict. He told us that a local MPA (Member of the Provincial Assembly) visited his house and, upon seeing his love for wildlife, with all the pictures of animals plastered across his walls, "He invited me to his house to chat with his children, given their affinity and love for nature."

His love for leopards is unwavering. Though he works to protect and conserve all animals, his one true love is the wild cats of Nathiagali. Sajid's work in raising awareness about their habitat in local villages where cattle are killed as humans infiltrate deeper into wildlife territory, teaching locals how to evade killing the big cats, taking alternative measures to protect their livestock and using alternate methods of dispersing the cats has educated the locals to a great extent.

"The leopard's population had plummeted earlier in 2008-9. Every year, 7-8 leopards were killed, which is a staggeringly high number in the Nathiagali region, within the Ayubia National Park region. Since the start of the projects to protect leopards and wildlife, with our awareness-raising sessions, people do not kill wildlife here anymore. Through old age and sickness, 2-3 leopards now die, but there's always room to do more meaningful work," emphasised Sajid, explaining the positive impact of his work.

Sajid and Waheeda are harbingers of co-existence and advocate to live in harmony with wildlife, "It is we who tread ever deeper into their shrinking world; the duty to change lies with us — not only in how we act, but in how we choose to see" surmised Sajid.

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BEARING THE FACTS

THE ASIATIC BLACK BEAR IN PAKISTAN

Information provided by: Dr Muhammad Kabir, Incharge - Wildlife Ecology Lab, The University of Haripur and Faizan Ahmad, Research Officer, Pakistan Forest Institute, Peshawar

Pakistan is home to two subspecies of the Asiatic black bear *(Ursus thibetanus)*:

The Himalayan black bear *(U. t. laniger)*, inhabiting forests in Azad Jammu and Kashmir, Gilgit-Baltistan, and Khyber Pakhtunkhwa, at elevations between 1,500 and 4,000 meters.

The Balochistan black bear *(U. t. gedrosianus)*, found in the arid mountains of Balochistan, and now considered Critically Endangered, with fewer than 50 mature individuals likely remaining.

WHY THEY MATTER

Seed dispersers, scavengers, insect regulators: they maintain the health of forest ecosystems.

Umbrella species: Protecting them also protects hundreds of other species.

DID YOU KNOW?

- They become nocturnal to avoid humans, leading to nighttime crop raids.
- Bears in Swat use rock crevices on steep mountain slopes and tree hollows as dens for hibernation and raising cubs.
- In autumn, bears enter hyperphagia—eating nonstop to build fat for winter.

FAVORITE FOODS

Acorns from oak forests *(Quercus spp.)*

Fruits like persimmon *(Diospyros lotus)*, berries, hazelnuts

Insects from snag trees

Cambium from healthy trees of Deodar Cedar *(Cedrus deodara)* and Blue pine *(Pinus wallichiana)*

When wild food runs out, bears raid farms and orchards, triggering conflict with humans

THREATS THEY FACE

Habitat loss from agriculture and logging

Poaching of cubs for bear dancing and illegal trade

Retaliatory killings due to crop raids and livestock loss

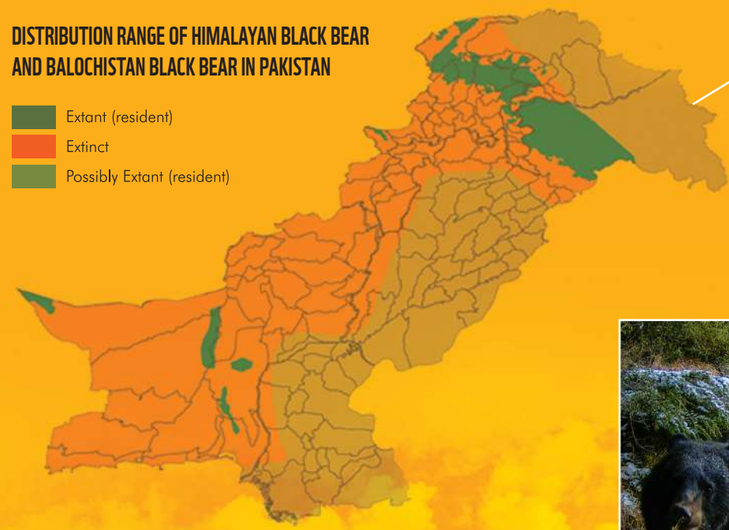
Myths about bear fat's medicinal value

KEY ACTIONS TO COEXIST

- Restore native food trees like persimmon *(Diospyros)* and oak trees *(Quercus)*
- Install electric fences and use livestock guardian dogs
- Educate communities on bear behavior and legal protection
- Ban illegal trade and prosecute poachers
- Support local communities with conflict compensation

Only around 2,500 remain in Pakistan

DISTRIBUTION RANGE OF HIMALAYAN BLACK BEAR AND BALOCHISTAN BLACK BEAR IN PAKISTAN



"WHEN WE CONSERVE THE BEAR, WE CONSERVE FORESTS, LIVELIHOODS, AND RESILIENCE."

Wildlife Ecology lab – The University of Haripur.

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