

# Spring Update

2016



# Snow Leopard Conservation Hand-in-Hand with Community Development

The Jomolhari region is an important snow leopard hotbed for Bhutan. Because of this, a general misconception is that herders here lose many yaks to predation, causing “human-wildlife conflict,” for which authorities have deemed monetary compensation to alleviate herders’ losses as one solution. However, surveys in 2013 have shown that 34.1 percent of yak calves in Soe gewog succumbed to gid disease, an ailment caused by a tapeworm often resulting in fatality, whereas only 2.1 percent were killed by snow leopards in the same area. Herders lost more yaks to the disease than to predation, and it was clear that the solution to minimizing yak-calf mortality lays in improved veterinary care.

Over the last two years, subsequent surveys by the Department of Livestock Services (DoLS) have confirmed that gid disease was a greater cause of yak mortality compared to loss by predation. While endangered predators such as snow leopards may not be disturbed, the main cause of yak mortality, gid disease, could be tackled through veterinary intervention. If more yaks can be saved through improved veterinary care, locals will be in a position to accommodate smaller losses to snow leopards, thereby supporting their conservation. This logic formed the basis of the Jomolhari Snow Leopard Conservation Program.

## Addressing Gid Disease

With Bhutan Foundation support, DoLS and Jigme Dorji National Park authorities had carried out two intensive vaccination and sterilization camps in Soe Yutoed and Soe Yaksa communities in the Jomolhari region in 2013. Yaks were dewormed, and dogs were vaccinated, dewormed, and sterilized. While yaks are the intermediate hosts, dogs and other canids are the definitive hosts of the parasite that causes gid disease. Since then, annual veterinary interventions to reduce gid disease have been

carried out. The Livestock Extension Officer from the Jomolhari region recently trained 30 residents from nearby highland communities in veterinary care to deal with gid and other livestock diseases and promote proper animal husbandry practices. As a result of sustained efforts, gid disease incidents in calves in the area have been reduced from 34.1 percent in 2013 to 7.7 percent in 2015. Support for this was provided by Disney Conservation Fund through the Snow Leopard Conservancy.

## Supporting Community Health and Education

The project also takes a holistic approach to mountain landscape conservation that addresses wildlife conservation needs while accommodating community development priorities. During the third annual Jomolhari Mountain Festival last October, medical professionals from the Khesar Gyalpo University of Medical Sciences of Bhutan conducted health screenings for participants at the gathering. The health camp is now integrated into the annual Jomolhari Mountain Festival. At other times, community members remain scattered in their herders’ camps across the mountainsides. The festival also provides a platform for the school children at the Jomolhari School to showcase their creativity around their knowledge of snow leopards and other local wildlife. These students just moved into a new

school we handed over to the community last year as part of the project. It has better insulation, lighting, and space compared to the old school.

An additional, general concern is that yak herding is declining in Bhutan’s mountain communities. This has been observed from Haa in the west to Sakteng in eastern Bhutan. The presence of herders tending yaks in Bhutan’s northern regions bodes well for the economy, national security, and conservation of mountain landscapes that have co-evolved with humans and livestock for over 4,000 years. Augmenting the government’s efforts to improve access to quality health care, education, and livelihood opportunities will go a long way in maintaining yak herding as a viable occupation for younger generations.

A close-up portrait of a young boy with dark hair, smiling gently. He is wearing a vibrant, multi-colored plaid jacket over a red turtleneck sweater. The background is a blurred, scenic view of a mountain range under a soft, overcast sky.

## What's Next?

- Establish solar electrification for the Jomolhari School.
- Establish broadband internet connection in Jomolhari for use by government and community members.
- Improve health care delivery mechanisms at the Basic Health Unit.
- Continue improved veterinary care services.
- Explore community-based tourism opportunities.
- Expand conservation education with youth and public.

# Tracking Bhutan's Mountain Tigers

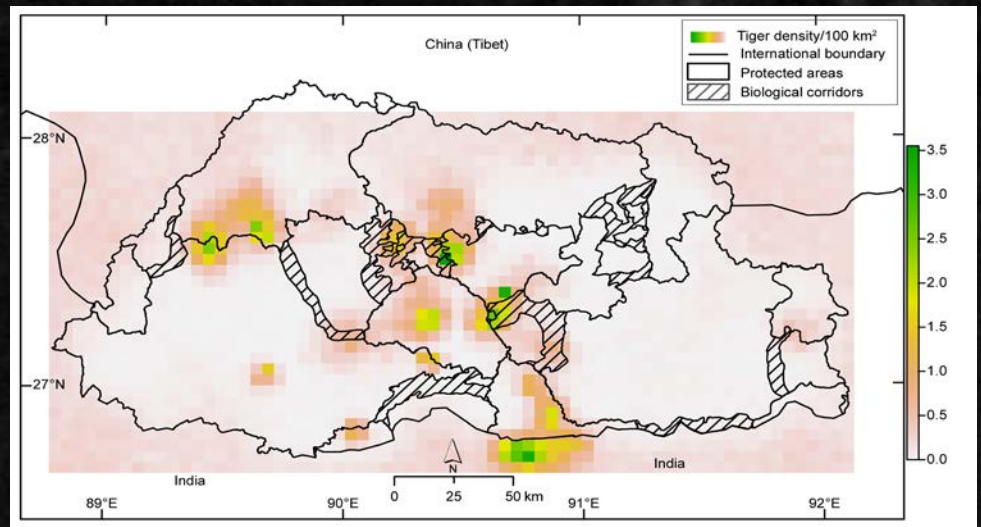
In 2015, Bhutanese biologists and conservationists proudly declared the results of the first comprehensive nationwide tiger surveys. An estimated 103 adult tigers were reported to thrive in the jungles and mountains of Bhutan. Working with hundreds of field staff from the Department of Forests and Park Services, the Ugyen Wangchuck Institute for Conservation and Environment (UWICE) was an integral part of these surveys. Two theories were further confirmed: Bhutan recorded the presence of tigers at the highest elevation (4400 masl), and Bhutan had a well-connected source population of

tigers. Indeed, Bhutan is the only place on earth where tigers and snow leopards share the same habitat.

These findings have big implications for the fate of the endangered cat globally. Even as the larger tiger landscape adjacent to Bhutan loses the big cats to poaching and habitat loss, Bhutan with its favorable conditions, continues to pump out tigers to repopulate such areas as long as there is space and food for them. Bhutan functions as the ecological heart of the eastern Himalayas.

## Tiger Radiotelemetry

In April 2015, government biologists recorded something remarkable. A young male tiger cub photographed two years ago in Royal Manas National Park (in southern Bhutan) was captured in cameras again near Ramena in Jigme Dorji National Park, in northern Bhutan. It is an amazing story of how a young tiger ventured out across the country perhaps to establish its own territory. What allows this to happen in Bhutan? Are the biological corridors connecting Bhutan's protected areas functionally sound? How can the global community learn from such a conservation setup? To answer these important questions, UWICE and the parks have initiated a radiotelemetry project to track Bhutan's mountain tigers using GPS collars. Such information will add to the arsenal of scientific information that can be used for effective tiger and wildcat conservation. For instance, the dynamics of livestock predation and other interactions will be better understood, allowing conservationists to devise more effective solutions to human-wildlife conflicts.



Heat map showing relative distribution of tigers across Bhutan. (Source: UWICE)

## What's Next?

- Train Bhutanese field staff in tiger and wild-cat capture methodology.
- Conduct field sessions including trapping and collaring of wild cats.
- Monitor movement of collared tigers and other wild cats.
- Disseminate information of tiger and wild-cat movement.

## Bhutan: Source of Climate Data in the Himalayas

The HEROES project has positioned Bhutan as the only Himalayan country with such an extensive network of real-time weather stations and a network of youth engaged in a climate change project. The data from this project will make climate change science more robust for Bhutan, and will provide a better tool to understand and therefore address climate change. This multi-year project also hopes to inspire a new generation of Bhutanese eager to learn about the natural environment while also appreciating the rigors of science and exploration. The most recent training on Bhutan Phenology Observation in February 2016 brought together teachers from all participating schools and the Ministry of Education to refine their skills and share lessons from their experience with this ongoing project.

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## What's Next?

- Establish faster internet connection in select schools with weather stations that currently do not have broadband connectivity.
- Train teachers and nature club members on data collection and analysis.
- Disseminate HEROES data for public and scientific community.
- Collaborate with Ministry of Education to make section on climate change in high-school curriculum more field-based and hands-on.

# Understanding Climate Change Using Citizen Science

Visitors and locals who frequent Bhutan's spectacular mountains observe that more and more of what were once thick snow packs and snow fields now lay bare as dark, exposed rock faces. There is no doubt that climate change is responsible for this. Bhutan has already made a commitment to remain carbon neutral, although the country is presently carbon negative. However, Bhutan is still not spared from the wrath of climate change. The Himalayan region bears the brunt of a warming climate as seen through

fast-receding glaciers and erratic weather patterns. Often, climate change science seems abstract, and many citizens fail to realize that the impacts can be felt in our immediate environment every day. It is important for Bhutanese citizens to realize that small actions locally can help to either mitigate the causes (by reducing greenhouse gases) or help adapt to changing conditions. In order to do that, a better understanding of climate change and its effects is key.

## Involving and Inspiring Youth

The Himalayan Environmental Rhythm Observation and Evaluation System (HEROES) project is an extensive network of 23 weather stations across Bhutan's diverse altitudinal and geographical spread that record data on climate variables such as temperature, precipitation, soil moisture, and solar radiation. Most of these stations are managed by nature clubs in public schools where students also record observations on plant phenology in their environment (i.e., when the first bud burst occurs, when the first leaves appear, when the first fruit appears, etc.) for a selected number of species of trees, shrubs, and herbs. They are, in essence, recording nature's own calendar. Through this project, over 600 students and teachers are learning more intimately about their environment and contributing important data on how the natural environment responds to climate change. This citizen science project inspires hundreds of young Bhutanese to learn plant identification, taxonomy, and ecology. The project is now included in Bhutan's high-school environmental science curriculum to explain climate change and its effects.

## Promoting an Inclusive Society

Education for all has been and continues to be a priority for Bhutan. As such, the Bhutan Foundation works in collaboration with the Early Childhood Care and Development and Special Educational Needs Division under the Ministry of Education to enhance educational opportunities for children with special needs. We started the Special Education Program under the guidance of a US Special Education Committee and in partnership with the Ministry of Education and the Bhutan Youth Development Fund in 2008 to build capacity of special

education teachers in Bhutan. The program currently supports 12 public schools across the country in training teachers and providing learning materials. The main focus for such trainings is on the largest percentage of students requiring help, which is the group of students with mild to moderate learning difficulties. The Foundation also supports building institutional linkages with international agencies to strengthen and build local capacity and is supporting efforts to train youth with visual impairments for employment.

## Support for Special Education in Schools and Transition

Over the past eight years, we have witnessed tremendous success and dedication from our partners on the ground, which has allowed our program to grow. We are happy to share that this program has trained more than 450+ local teachers throughout Bhutan and now supports 12 public schools across the nation. Collaboration with stakeholders and growth in partnerships has resulted in a much greater level of awareness throughout Bhutan.

In our efforts in promoting an inclusive society, the Bhutan Foundation in collaboration with the Disabled Persons' Association of Bhutan, a local civil society

organization (CSO), started a transition program to train youth with visual impairments in spa therapy in 2014. Under the program, these individuals who have visual impairments and have either dropped out of school or have never been to school, spent six to nine months training in spa therapy at the Amankora Resorts in Thimphu and Paro. After being certified as spa therapists, two of the trainees ventured even further to start their own business: Dhungsel Home Spa. Others who have been trained through the program have been employed at local hotels and spas.

## Capacity-building for Social Workers

With growing awareness in the country, Bhutan is now seeing an increase in the number of individuals with moderate to severe disabilities. To address this need, the Bhutan Foundation, in collaboration with the Anderson Center for Autism in New York, is supporting the training of two social workers from Ability Bhutan Society (ABS), a local CSO that provides support for children with disabilities. These newly skilled social workers will return to Bhutan and will adopt effective approaches within their organization and train other social workers to develop a robust clinical program at ABS.



## What's Next?

- Build a partnership with Perkins International to support the Ministry of Education in developing an implementation plan for their strategic plan relative to special education.
- Extend special-education resource support to three additional school by 2018.
- Support International Disability Day on December 3, 2016, in partnership with the Ministry of Education and local CSOs.
- Create further awareness about the contributions and needs of individuals with disabilities and, especially, the need for transition programs.

# Public Health: Preparing for Tomorrow

One of Bhutan's biggest challenges is how it will be able to sustain a free health-care system and improve health care for its citizens. The responsibility of educating and training the health workforce in Bhutan is led by the Khesar Gyalpo University of Medical Sciences of Bhutan (KGUMSB), Bhutan's only health-focused educational

institute. The Bhutan Foundation is helping KGUMSB build institutional capacity focused on public health research, training, programs, and policy. Fellowships, student exchanges, and public health trainings are developed in collaboration with Yale University's School of Public Health.

## A New Platform for Public Health Research

The Bhutan Foundation, in collaboration with KGUMSB, launched Bhutan's first medical journal, the *Bhutan Health Journal*. The journal will provide a platform to publish scientific articles for the researcher, a learning platform for the health professional, and a source for helping policy-makers make evidence-based decisions. We also granted four health research studies by Bhutanese researchers to support innovative and relevant research that advances health care in Bhutan. To enhance their capacity, more than 50 Bhutanese researchers were trained through workshops in writing scientific papers, research methodology, research ethics, and more. KGUMSB faculty in collaboration with Yale University and the University of California San Francisco conducted all the trainings in Bhutan.

## Capacity-building for Faculty Members

The Bhutan Foundation supported six KGUMSB faculty members to attend a semester-long fellowship at the Yale School of Public Health with the goal of improving the content, methods, and techniques of teaching public health courses in Bhutan. The fellowship provided networking opportunities with other professors and students from different countries, allowing the faculty members to further explore research opportunities.





## What's Next?

- Provide a platform to share and conduct research on public-health-related issues. The first public health discourse will focus on nutrition and lifestyle from four perspectives: economy, environment, health, and spirituality.
- Conduct trainings in health research to improve the quality of scientific publications and to support the initial years of the *Bhutan Health Journal*.
- Establish a small-grants health research fund at KGUMSB to continue providing small-scale research grants on an annual basis to promote new and innovative health research in Bhutan.
- Develop institutional linkages for the KGUMSB in order to facilitate faculty, student, and knowledge exchanges.

## What's Next?

- Ensure that all new general doctors are trained through the National Emergency Medicine and Trauma Care modules each year.
- Focus trainings on nurses working in emergency and trauma care.
- Provide first responders and basic life support trainings in Bhutan for the public interest.
- Set up a customized Trauma Registry at the Jigme Dorji Wangchuck National Referral Hospital.

# The Growth of Emergency Medical Services

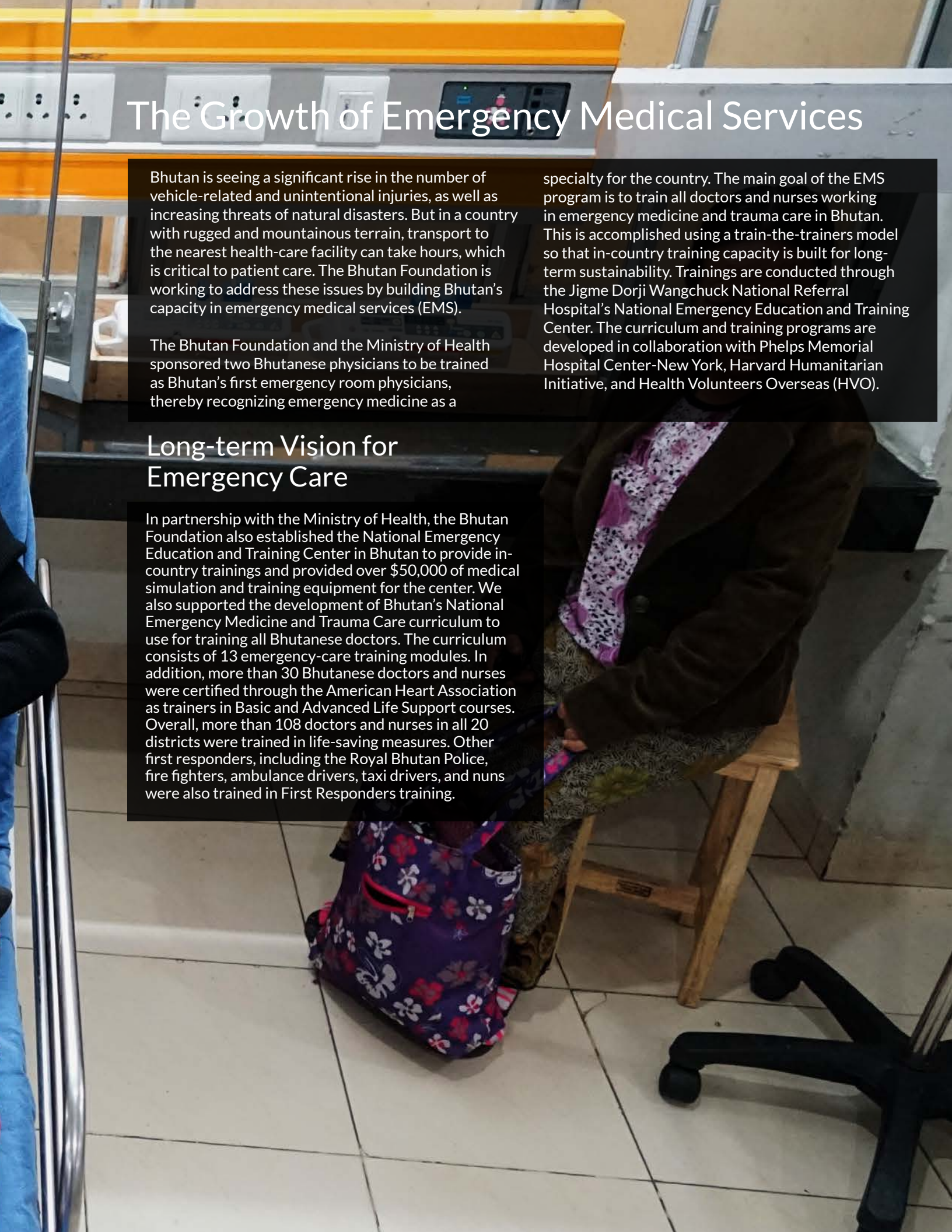
Bhutan is seeing a significant rise in the number of vehicle-related and unintentional injuries, as well as increasing threats of natural disasters. But in a country with rugged and mountainous terrain, transport to the nearest health-care facility can take hours, which is critical to patient care. The Bhutan Foundation is working to address these issues by building Bhutan's capacity in emergency medical services (EMS).

The Bhutan Foundation and the Ministry of Health sponsored two Bhutanese physicians to be trained as Bhutan's first emergency room physicians, thereby recognizing emergency medicine as a

specialty for the country. The main goal of the EMS program is to train all doctors and nurses working in emergency medicine and trauma care in Bhutan. This is accomplished using a train-the-trainers model so that in-country training capacity is built for long-term sustainability. Trainings are conducted through the Jigme Dorji Wangchuck National Referral Hospital's National Emergency Education and Training Center. The curriculum and training programs are developed in collaboration with Phelps Memorial Hospital Center-New York, Harvard Humanitarian Initiative, and Health Volunteers Overseas (HVO).

## Long-term Vision for Emergency Care

In partnership with the Ministry of Health, the Bhutan Foundation also established the National Emergency Education and Training Center in Bhutan to provide in-country trainings and provided over \$50,000 of medical simulation and training equipment for the center. We also supported the development of Bhutan's National Emergency Medicine and Trauma Care curriculum to use for training all Bhutanese doctors. The curriculum consists of 13 emergency-care training modules. In addition, more than 30 Bhutanese doctors and nurses were certified through the American Heart Association as trainers in Basic and Advanced Life Support courses. Overall, more than 108 doctors and nurses in all 20 districts were trained in life-saving measures. Other first responders, including the Royal Bhutan Police, fire fighters, ambulance drivers, taxi drivers, and nuns were also trained in First Responders training.



# Preserving Bhutanese Heritage for the Future

Under the patronage of Her Majesty the Queen Mother Ashi Tshering Pem Wangchuck, the Bhutan Foundation supports the restoration and adaptive re-use of the Wangduechhoeling Palace in partnership with the Ministry of Home and Cultural Affairs, Division for Conservation of Architectural Heritage Sites (DCHS). The Wangduechhoeling Palace bears historic significance as a powerful symbol of the establishment of monarchy in Bhutan and represents the beginning of an era of peace and stability in the country. The Palace is also an extraordinary example of traditional Bhutanese architecture and perhaps the finest representation of 19th century Bhutanese architecture.

The lack of maintenance over the last half-century has left the Palace in a vulnerable state and much in need of restoration. Some of the timber partition walls are broken, mud plaster works have fallen off the walls, and timber flooring in some rooms are disintegrating. The need for documentation and restoration of this unique architecture is urgent, and DCHS has embarked on this role with the Bhutan Foundation. Once restored, the palace will serve as a bridge to the past, connecting and educating visitors on Bhutan's history and culture and serving as a place where people can envision important stories from the past. We are supporting three critical phases of this important restoration.

## Restoration of Lingka Lhakhang

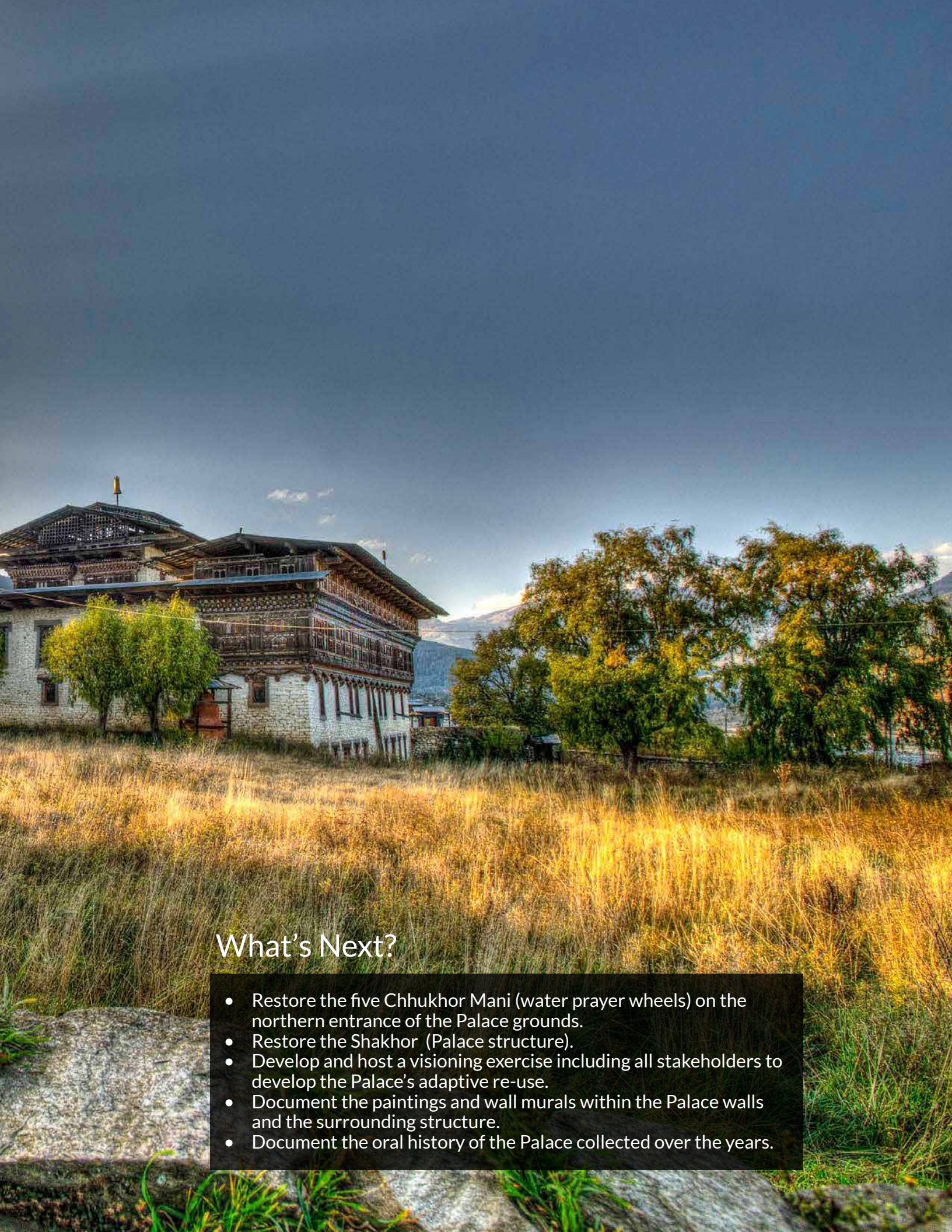
With support from the US Ambassadors' Fund for Cultural Preservation and the Bhutan Foundation, DCHS has completed the restoration of the Lingka Lhakhang at the Palace grounds. This Lhakhang or monastery is located in the northern part of the Palace grounds and was built as an additional space for conducting religious rituals for the country during the time of Bhutan's Second King, Druk Gyalpo Jigme Wangchuck.

## Heritage Conservation

In this next phase of the project, we will continue to work in partnership with DCHS to implement plans developed to support the restoration of the structures encompassing the Palace grounds. With minimal damage to the existing structure, conservation techniques will be used to improve structural balance and replace timber disintegration. Following the restoration, plans have been developed for an adaptive re-use of the Palace. This is aimed to be a model project in the country that will contribute to the sustainable protection of heritage sites throughout Bhutan.

## Documentation and Sustainability

Documentation of the current state of the Palace has been completed, and further documentation of successful restoration will be required. The stunning paintings on the façade and walls of the palace are also need preservation and documentation. These conservation techniques will be documented, and international technical expertise will enhance the capacity of DCHS in future restoration work throughout the country.



## What's Next?

- Restore the five Chukhor Mani (water prayer wheels) on the northern entrance of the Palace grounds.
- Restore the Shukhor (Palace structure).
- Develop and host a visioning exercise including all stakeholders to develop the Palace's adaptive re-use.
- Document the paintings and wall murals within the Palace walls and the surrounding structure.
- Document the oral history of the Palace collected over the years.

# Developing Partnerships to Promote Greater Awareness of Bhutan



The Bhutan Foundation seeks to promote broader understanding of Bhutan in the United States and abroad. One way we approach this is by developing partnerships with various organizations and institutions in the United States and abroad and connecting them with local nonprofit organizations in Bhutan as well as the government of Bhutan through relevant ministries.

The foundation also supports, hosts, and participates in events to increase understanding of Bhutan in the United States. In 2015, the Bhutan Foundation

welcomed the Prime Minister of Bhutan Lyonchhen Tshering Tobgay in New York during the launch of the Bhutan For Life Initiative in partnership with the World Wildlife Fund. In addition, the Bhutan Foundation also celebrated the Bhutanese Losar (New Year) in San Francisco with friends and supporters of Bhutan. These events would not be possible without the support of the Foundation's board members, who continue to develop key partnerships for the Foundation and build our network. This ultimately benefits critical work in Bhutan.



## What's Next?

- Launch the book, *Vanishing Faces of Bhutan*, by Joseph Barker and Linda Leaming in Nashville, TN.
- Support events to celebrate the establishment of the Gyalum Charitable Trust in Seattle, New York, and Washington, DC.
- Showcase Bhutanese films at the Environmental Film Festival in the Nation's Capital.
- Celebrate Bhutanese Losar (New Year) in San Francisco, CA in 2017.



The Bhutan Foundation works in collaboration with local partners in Bhutan and international partners to build capacity and fill gaps. Without the strong network of partners, the projects we support would not be possible. The Foundation would like to thank everyone for their generous time and support for our projects.



# Our Partners

## Our Local Partners

Ability Bhutan Society  
Bhutan Canada Foundation  
Bhutan Centre for Media and Democracy  
Bhutan Ecological Society  
Bhutan Health Trust Fund  
Bhutan Media Foundation  
Bhutan Nuns Foundation  
Bhutan Youth Development Fund  
Disabled Persons' Association of Bhutan  
Draktsho Vocational Center for Youth and Children  
Jangsa Animal Saving Trust  
Khesar Gyalpo University of Medical Sciences of Bhutan  
Lhomon Society  
Loden Foundation  
QED Consulting Group  
Respect, Educate, Nurture and Empower Women  
Royal Government of Bhutan  
Royal Society for Protection of Nature  
Tarayana Foundation  
Ugyen Wangchuck Institute for Conservation and Environment  
VAST (Voluntary Artists' Studio, Thimphu)  
World Wildlife Fund Bhutan

## Our International Partners

Anderson Center for Autism  
Clinical Data Management  
DBA Trauma Program Services LLC  
Geographic Expeditions  
Harvard Humanitarian Initiative  
Health Volunteers Overseas (HVO)  
Humane Society International (HSI)  
Karuna Foundation  
Mobulz LLC  
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Wildlife Conservation Society  
World Monuments Fund  
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# Ways To Give

With your support, the Bhutan Foundation and its Bhutanese partners can make a bigger impact. Here are some ways to be involved:

## Donate online

[www.bhutanfound.org/Donate](http://www.bhutanfound.org/Donate)

## Mail a check

Bhutan Foundation  
3121 South Street NW  
Washington, DC 20007

## Make a wire transfer

To make a wire transfer, please contact the Bhutan Foundation at +1 (202) 609-7363 or email: [info@bhutanfound.org](mailto:info@bhutanfound.org)

## Make a stock gift

For further inquiries, please contact Ms. Dawa Sherpa at +1 (202) 609-7363 or email: [dawa.sherpa@bhutanfound.org](mailto:dawa.sherpa@bhutanfound.org)

Please contact the Bhutan Foundation office by telephone or email once the transfer has been arranged.

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