



Update 2020



Bhutan
FOUNDATION





FOREWORD FROM OUR EXECUTIVE DIRECTOR

As the world around us is grappling with the COVID-19 pandemic, we are reminded how humanity is connected through our common aspirations for peace and happiness. We stand in solidarity with everyone in Bhutan and elsewhere in adapting to a new reality. And in doing so, we take to heart our mission of building local capacity and facilitating global support in order to build Bhutanese professional capacity through our programs. As we enter a new decade, the Bhutan Foundation is poised to embrace bolder and bigger ideas through strategic partnership in this inter-dependent world.

We have entered into partnerships with institutions such as the Massachusetts Institute of Technology (MIT), the European Council for Nuclear Research (CERN), and the National Aeronautics and Space Administration (NASA), in collaboration with Bhutanese partners, on a multi-pronged approach to advance STEM education in Bhutan at different levels: for schools in Bhutan, Bhutanese students in the United States, and young inventors and innovators.

Our support in the areas of Bhutan's built environment has led to several outcomes. The super energy-efficient library at the Jigme Singye Wangchuck School of Law is coming along well; expert recommendations for the Thimphu Structural Plan review are ready; and the Ministries of Health and Education have indicated their eagerness to adopt energy-efficient and green building guidelines in new construction. Collectively, these hold a great promise for Bhutan's construction industry, aligning it well with the country's reputation as a leader in environmental stewardship and compassionate governance.

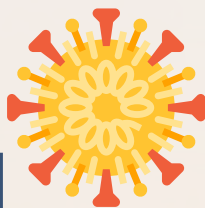
We now enter the next phase of restoration of the Wangduechhoeling Palace in Bumthang: the museum design and installation. This is the most exciting phase of this multi-year project that will see to fruition the restoration and re-use of an important heritage site, through which we can cherish and honor the legacy of Bhutan's forefathers.

Our most inspiring work happens in the grassroots communities – whether we are working on water security, local food production, or ensuring access to health care. It is my pleasure to share with you a few of these inspiring stories and ideas in this edition of our Update.

Thank you for your continued support and partnership. Until we meet in person again, please stay safe.

Tshewang Wangchuk
Executive Director

COVID-19 PROGRAM UPDATES



Snow Leopard Conservation Program

Up in the highlands, people remain hardy and prepared for changes. As they regularly do, nomadic communities in areas like Jomolhari have stored roughly a year's worth of food in preparation for their regular movement about the mountain pastures following fresh vegetation for their yaks. This leaves such communities in relatively good standing for now during this period of uncertainty. One of our major programs in the area, the Snow Leopard Conservation Program, is currently on hold while national responses to the pandemic take precedence. In lieu of in-person deliveries, we have made our *Snow Leopard Readers* available for free online with more than 2,000+ downloads so far.



Jomolhari

Thimphu*

Sephu

Emergency Medical Services (EMS) Program

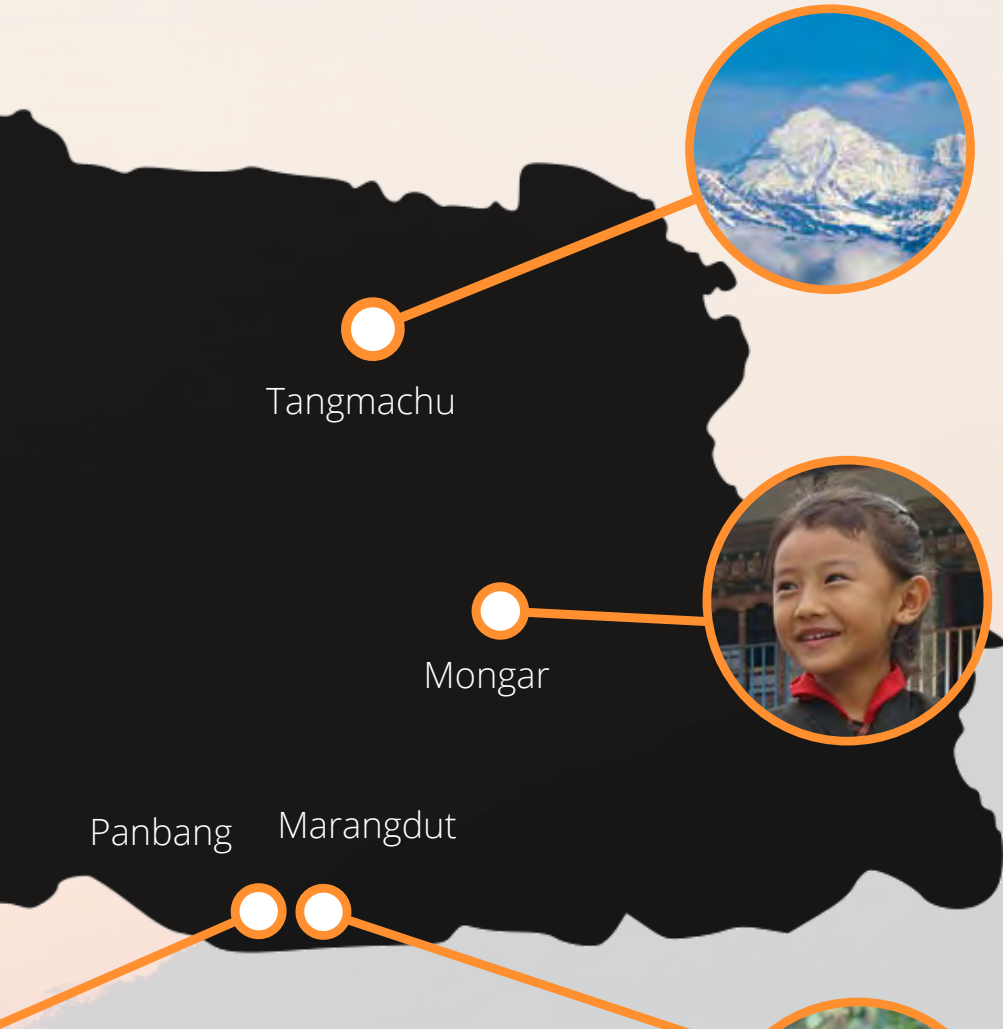
The Jigme Dorji Wangchuck National Referral Hospital (JDWRH), located in the capital city of Thimphu, is Bhutan's only tertiary level hospital and key to managing COVID-19 cases in Bhutan. Planned EMS training programs are on hold while health-care personnel attend to the current situation. Instead, the Bhutan Foundation has worked with the Ministry of Health to provide critical PPE needed during this time, such as N95 masks, hand sanitizers, face shields, and disposable gowns, to the three major hospitals located in central, eastern, and southern Bhutan (Thimphu, Mongar, and Gelephu).



Nomad Health Camps

For many of the nomadic communities in Bhutan, including Bumthang, Merak, Sakteng, and Sephu, the regular Nomadic Health Camps currently scheduled remain up in the air as health-care teams prepare for a worst-case pandemic. As of now, we hope that camps could be conducted as scheduled this fall.





Tangmachu

Mongar

Panbang Marangdut

HEROES Program

Due to the restrictions in place, all 20 of our schools under the HEROES (Himalayan Environmental Rhythm Observation and Evaluation System) program are closed. Although phenological data collection is on hold, weather data through the weather stations are still being collected. In addition, our partners at Ugyen Wangchuck Institute for Conservation and Environmental Research (UWICER) are using this time to fix any issues with current weather stations as well as planning and understanding how the data collected can be utilized.

Special Education Program

All schools in Bhutan remain closed due to social distancing protocols following the COVID-19 pandemic. While this has put a hold on a number of programs that we planned to implement in the schools, we have since provided guidelines for parents and teachers of children with special education needs online. These guidelines provide everyday lesson plans and activities for parents to support the educational needs of their children at home during this crisis.

Sustainable Agriculture

A little way up the road in Marangdut, our organic farming programs in partnership with the Samdrup Jongkhar Initiative have become more relevant and increasingly important as the import of produce from India has become difficult due to cross-border travel restrictions since this March. The community is regularly updated and aware of these issues and has since planned to not only upscale food production, but also improve food diversity.

River Guides of Panbang

In the warm forests of Panbang, tourism, an industry that has been on a steady rise in recent years, has taken a hard hit. Our partners at the River Guides of Panbang (RGP) have had many cancellations, which have left them in a worrisome position without any income. We are maintaining a close connection with the team in Panbang to help mitigate immediate difficulties. So far, the RGP has lost Nu 1,982,150 (USD 29,150) in revenue this year due to these cancellations.



WANGDUECHHOELING PALACE: BRIDGING THE PAST WITH THE FUTURE

Now begins the largest undertaking yet as the scope of the Wangduechhoeling Palace Project transforms and repurposes the birthplace of Bhutan's monarchy into a museum, educational, and cultural heritage site. The palace will become a model for an adaptive re-use of an old heritage site and building for modern use, with proper fire mitigation strategies in place and accessibility for senior citizens and individuals with disabilities.





ADAPTIVE RE-USE

Over the past few years, the community in Bumthang has witnessed major restoration of the Wangduechoeling Palace, including replacing rotted foundational beams and restoring the exterior and interior paints with authentic mineral rock pigment paints. While restrictions in place on social distancing have halted construction work on the project for the time being, we are aiming to begin the largest undertaking yet as teams in DC and Thimphu prepare to enter the third phase of the restoration and re-use project in 2021. This exciting stage is where the future of the palace will take shape with help from experts in global heritage preservation, curatorial design, and future sustainability. Throughout this phase, a major component will include capacity building of Bhutanese curators, conservators, and designers on how to adapt an old building to new use. In addition, expertise from the Global Heritage Fund, a new partner of the Bhutan Foundation, will support the exploration of future sustainability programs and vision for the site. This key component will help train Bhutanese conservators to address the need for future planning and programs.

MODEL BUILDING

Simultaneous to the museum planning and design, proper fire mitigation and detection systems are in development thanks to a recent award from the Prince Claus Fund and the Gerda Henkel Foundation under the Emergency Preparedness for Cultural Heritage under Threat initiative. This program will help develop plans to reduce fire-related hazards, which remains the biggest threat to heritage sites during the restoration period in Bhutan and around the world. In addition, building universal accessibility will also become a key component of the palace, allowing access to senior citizens and individuals with disabilities throughout the space. The palace building will become a model for fire-safety measures and universal design for the rest of the country, as they still remain an issue for buildings throughout Bhutan.



PLANNING FOR TRANSITION WITH TECHNOLOGY

Technology is helping redefine what it means to be independent and participate as an active member of society even during these difficult times. Whether in terms of nationality, religion, interest, or even disability, innovation is fast becoming a way of opening doors and creating opportunities that in the past seemed impossible. The Bhutan Foundation is excited to support new projects to bridge the gap for persons with disabilities in Bhutan through technology.





SHEDDING LIGHT ON VISUAL IMPAIRMENT

Living with a disability can be an isolating reality for many persons with blindness or visual impairment. In Bhutan, we're excited to help offer a new opportunity for connection with the *Read to Light* app. This application, three years in the making, is a product of the Loden Foundation, with support from the Bhutan Foundation, designed to improve access to knowledge and books for people with visual impairment and reading difficulty. *Read to Light* will help create an audio book platform for listening to and recording both local and international books, including religious texts, in both English and Dzongkha (Bhutan's national language). *Read to Light* is set to launch with new titles this year, coinciding with the International Day of Persons with Disabilities on December 3, 2020.

NEW PARTNERSHIPS TO CHANGE LIVES

In line with His Majesty's vision of advancing Bhutan with innovation and technology, we are also excited to begin this new year with two new partnerships for our special education program in supporting youth with disabilities in their transition from school to adulthood. We are partnering with AIMS Media, an education solutions company based in Delhi, India, that provides technical support for special needs schools and colleges to convert existing and traditional education systems into more interesting, innovative, and employment-oriented systems. Our local partner in Bhutan is Stepping Stones Early Childhood Care and Development (ECCD) Center that will pilot a program and create a model that works for our Bhutanese youth through the Ability Enhancement Multimedia Program (AEMP).

AEMP is an educational program focusing on various pre-vocational, vocational and related skill building for youth with disabilities. After months of consultation and testing, we are excited to pilot this 18-month program with 5 young adults with various disabilities, who were chosen based on their needs and through an assessment carried out by AIMS technical expertise. The online-based program will take place three times a week at the Stepping Stones ECCD as an after-school program. By the end of the program, these young adults will have acquired skills such as newsletter designing, data entry, social media advertising, motion graphics, photography, video editing, and much more. The goal of the program is to support these young adults by providing skills using technology so that they have opportunities in the future to become independent and self-reliant.



BUILDING A STEM FOUNDATION IN BHUTAN

Setting a strong foundation for Bhutanese scientists requires facilitating international partnerships with global leaders in research, education, and innovation. This year, the Bhutan Foundation is excited to announce new partnerships in development with the European Council for Nuclear Research in Switzerland (CERN), the National Aeronautics and Space Administration (NASA), and Massachusetts Institute of Technology (MIT), to create a multi-tiered and multi-faceted approach to expand and encourage Bhutan's growing scientific community—from the student, to the entrepreneur, to the seasoned researcher—turning long-held dreams into a new reality.



SCHOOLS

Transforming a child's curiosity into the beginnings of a scientific mind starts in the classroom. To strengthen the capacity of Bhutan's educators in STEM across the country, we will support a collaboration between the Royal University of Bhutan and scientists from Switzerland's CERN to train approximately 100 Bhutanese science and mathematics educators in the latest effective pedagogies at a multi-faceted educator workshop in April 2021 when restrictions for public gatherings due to COVID-19 have likely eased. The results of these presentations, group discussions, and experiments will help secondary schools in Bhutan develop STEM curricula that are relevant in the 21st century. Educators nationwide will be able to guide Bhutanese youth in the development of their skills in STEM, giving them confidence to apply their STEM knowledge and skills in their future careers.

RESEARCH

As soon as is feasible due to restrictions in the United States on social distancing, NASA will accept Bhutanese interns based in the United States to work on the practical application of Earth sciences and satellite technology to research, analyze, and create solutions for real-world problems. By learning from NASA scientists, these students will identify issues in areas such as urban design, water scarcity, climate change, and forest cover loss and will work on projects specifically related to ongoing issues in Bhutan. This year, we've begun partnering with the team at NASA to facilitate this program, including the development of its first Bhutanese cadre. By partnering with NASA to create new opportunities for Bhutanese students, we hope to prepare students to take the next step in their education from absorbing to creating new knowledge for the next generation.

INNOVATION

From education to new research comes the final leg of this new system for scientific advancement in Bhutan: bringing new ideas to life. The Bhutan Foundation has just entered into a new partnership with MIT and Druk Holdings and Investment Ltd. (DHI) to create a Super Digital Fabrication Laboratory in Bhutan. This "Super Fab Lab," which contains equipment such as 3D printers, 3D design elements, and woodworking and metalworking machinery to create and innovate new code, machinery, and products, would be only the second Super Fab Lab in the world as of 2020—the first being in Kerala, India. With this state-of-the-art Super Fab Lab alongside additional smaller Fab Labs around Thimphu, Bhutanese youth, inventors, and innovators will have unprecedented access to digital manufacturing and computer-aided design facilities in the country. This project, funded by the US Department of State and DHI at a total of \$2.4 million, will change the landscape for digital manufacturing and entrepreneurship, and open up a whole range of possibilities never imagined before.



TRANSFORMING BHUTAN'S NEW BUILDINGS

Innovation, inspiration, and influence are all in progress at what will soon be the most energy-efficient building in the Himalayan region: The Jigme Singye Wangchuck Law School Library in Bhutan. And with new construction opportunities on the horizon, a “Well-Tempered,” environmentally-friendly, and resident-friendly Thimphu may be just around the corner.





A NEW ENERGY-EFFICIENT LAW LIBRARY

Built with superior design and material guidelines, the new law library follows the principles of an energy-efficient building. Future leaders of Bhutan studying at the law school will experience first-hand what is possible in terms of energy-efficient buildings. Once completed, the idea is to use this aspirational building to influence Bhutanese builders, contractors, and engineers to adopt these principles to promote energy-efficient building practices in Bhutan. This project is supported by the Karuna Foundation.

EXPANDING THE FUTURE OF GREEN BUILDING IN BHUTAN

Ever since His Majesty distributed copies of Jonathan Rose's book *A Well-Tempered City* to all the Dzongdag (district governors) and mayors in Bhutan, we have engaged the support and guidance of Rose and his team to provide recommendations for the review of the Thimphu Structural Plan—a long-term urban planning guide map of Bhutan's capital. A long process of engagement between this team and Bhutanese urban planners resulted in a solid 10-point recommendation plan to redefine a Well-Tempered Thimphu as the expanded Dzong of the 21st Century: a city for the study and application of wisdom, compassion, and power.

The Health and Education Ministries have national mandates that require enormous amounts of construction of schools and hospitals. When these two ministries adopt sustainable and energy-efficient building principles, it will result in a twofold benefit: construction of numerous Bhutanese public structures will become energy efficient and therefore save hydropower, and a large segment of the Bhutanese population (students and patients) will experience living in comfortable buildings.

In keeping with Bhutan's leadership in environmental stewardship, these approaches will revolutionize the Bhutanese construction industry in such a way that sustainable building principles and energy efficiency will become a natural part of future Bhutanese construction. We have already made headway with the two important ministries and have received initial buy-in and interest from them. Though programs are currently on hold during the pandemic, we look forward to leveraging ongoing interest by connecting professionals and leaders in this field.



BHUTAN TO CONVENE TIGER-RANGE NATIONS TO ADDRESS CONNECTED HABITAT

Tigers are a powerful symbol of conservation around the world, but we believe the dominant theory for their conservation focus is based on outdated data that doesn't account for Bhutan's contributions as a prominent tiger source. The Royal Government of Bhutan, in partnership with many agencies, will host the International Tiger Conference in Bhutan later this year, bringing together leaders in science and government from all tiger-range countries to take stock of global tiger conservation efforts. Together, they will chart the way forward to save wild tigers in the 21st century.



A NEW WAY TO CONCEPTUALIZE TIGER CONSERVATION

The tragedy of the world's steep decline of tiger population in recent decades requires an international partnership to make change. Leaders knew this back in 2010 when officials from all thirteen tiger-range nations (Bangladesh, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Russia, Thailand, Vietnam, and Bhutan) gathered in St. Petersburg to discuss real-world solutions. However, with habitat destruction, human encroachment, and the ever-present threat of poaching, this coalition has had limited success in achieving the goal of doubling tiger populations. In partnership with several international agencies, including the Bhutan Foundation, Bhutan's Global Tiger Centre aims to remedy the ongoing problems by strategically addressing limitations with the current paradigm for tiger conservation. It seeks to highlight a renewed focus on the largest connected landscape that promises a much better chance for the survival of wild tigers in their habitat.

The Ministry of Agriculture and Forests, under the guidance of the Department of Forest and Park Services, will lead the 2021* International Tiger Conference, which will offer Bhutan the opportunity to present the case for an international tiger conservation model that conserves connected habitat across Bhutan, western Myanmar, and northern India. Bhutan and its protected forests will function as the ecological heart of this landscape, pumping out tigers into the combined habitat. Through this conference, conservation leaders will have the opportunity to take stock of how far we have come in terms of tiger conservation, build and sustain partnerships, and chart the way forward for the next high-level tiger conservation meeting in 2022, the next Year of the Tiger.

*Note: due to the coronavirus pandemic this important international conference will now be shifted to 2021.



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Royal Government of Bhutan
Royal Society for Protection of Nature
Stepping Stone Day Care
Tarayana Foundation
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VAST (Voluntary Artists' Studio, Thimphu)
World Wildlife Fund Bhutan

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USAID
World Wildlife Fund
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www.bhutanfound.org/donate

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Bhutan Foundation
21 Dupont Circle, NW
Suite 755
Washington, DC 20036

Make a Wire Transfer
or a Stock Gift

Please contact the Bhutan Foundation at
+1 202.609.7363 or email us at info@bhutanfound.org

A Gift in Your Will

Please remember the Bhutan Foundation with a gift in your will. There are several ways to make a bequest to the Bhutan Foundation through your will or other estate plan: a residual bequest, a percentage bequest, a specific bequest, or a contingent bequest.



The Bhutan Foundation has received a platinum rating from charity watchdog GUIDESTAR which holds the highest standards for evaluating non-profit organizations. This rating advises supporters like you so that you know every dollar is making the largest possible impact.

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