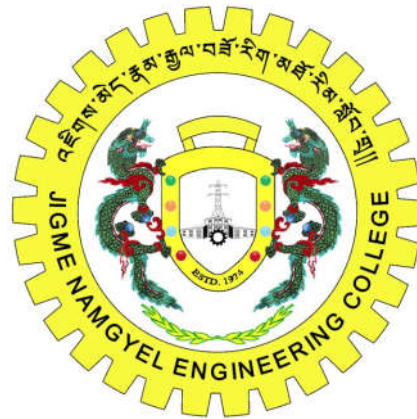
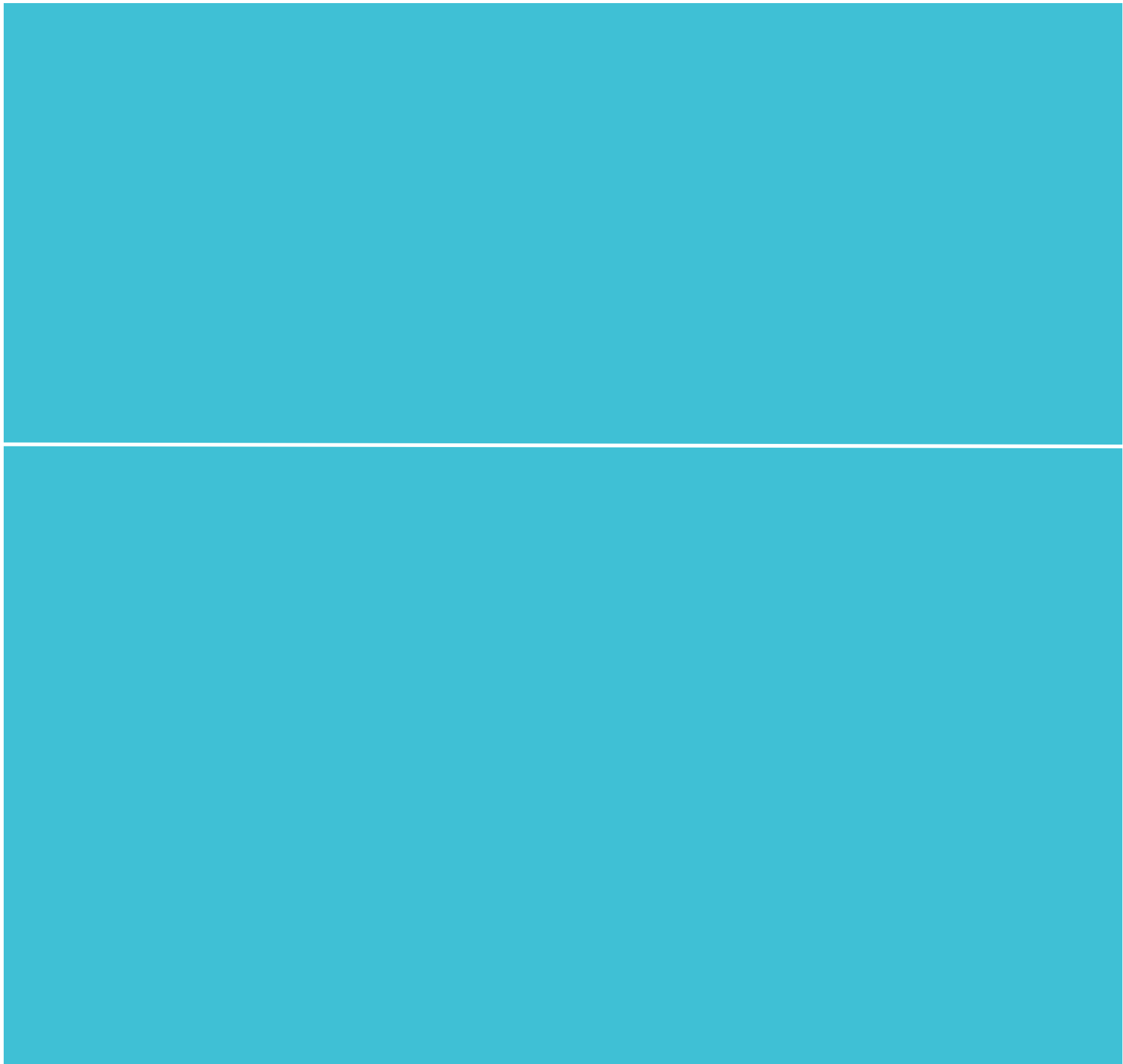


Exhibition Memoir 2019

Department of Civil Engineering and Surveying





Memoir²⁰¹⁹

DEPARTMENTAL EXHIBITION - I

Memoir 2019

First Edition ©2019

Published in Jigme Namgyel Engineering College

Photography by Department of Civil Engineering and Surveying

Designed by Phurba Tamang

All Rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any other information storage and retrieval system, without prior permission in writing from the department



ABOUT EXHIBITION

The Department of Civil Engineering and Surveying of Jigme Namgyel Engineering College organized their first Departmental Exhibition with the theme “A Heuristic to Supplement Classroom Learning “ on 18th October 2019. The event was graced by Hon’ble Lyonpo Yeshey Penjor, Minister of the Ministry of Agriculture and Forests.

Students showcased their exhibits consisting of various building models replicating monuments displaying rich architectural and cultural heritage from different parts of our country. Similarly, traditional and modern bridge models were also exhibited. The event displayed myriad of building and bridge models marking the quantum leap in the field of infrastructure development around the country. The exhibition highlighted the importance of conserving the traditional architecture and different building construction methods used in Bhutan.

The event was organized as a part of academic learning for students to understand about the traditional and modern structures as well as to provide insight on significance of heuristic learning apart from classroom learning. For every building model design blueprints, cost comparative analyses and use of various building materials across different regions of the country were worked out by the students. The students also learnt about different bridge types and design in and outside Bhutan.

These kinds of events are known to test the innovation and creativity among students and to bring out their thoughts to reality whereby supplementing theoretical learning with real life experiences. Since, heuristic learnings are known to bring out the best from the students, the department plans to organize similar events in the future as well.

GALEM'S HOUSE

It is located a km away from the Punakha Dzong, on the road between Punakha to Gasa. This 3 storied house is a testament to Bhutan's Romeo Juliet story



HOUSE FROM SAKTENG

Sakteng geog is located to the eastern most part of Trashingang Dzongkhag. It has 8 villages viz Jonkhar, Murbi, Thrakthrek, Tengma, Pusa, Borangtse, Borangmang and Sakteng. Jonkhar and Murbi villages are on the lower part of the geog where agriculture crops can be grown. The villages are located within the flat Sakteng valley.



HOUSE FROM PHOBJIKHA

Phobjikha is a bowl-shaped glacial valley on the western slopes of the Black Mountains, bordering the Jigme Singye Wangchuck National Park. Because of the large flock of black-necked cranes that winters here, it is one of the most important wildlife preserves in the country. Some people refer to this entire region as Gangte (or Gangtey), after the goemba that sits on a ridge above the valley.



HOUSE FROM DOROKHA, SAMTSE

Dorokha Drungkhag has three types of ethnic groups, which are Lhop/Doya, Lhotshompa and Drukpa. Majority of the land under Dorokha Drungkhag are occupied by Lhotshampas. 'Drukpas' whose origin is believed to somewhere from northern part of Bhutan are settled in Dogap and Pungthra village under Dophuchen and Duenchukha gewog respectively. The Lhops are settled at Jigme, Singye, Wangchuk, Sanglung and Satakha viilage under Dophuchen Gewog. They speaks dzongkha as well as their local dialect. It is bordered by Chukha Dzongkhag in the east, Haa Dzongkhag in the west and Samtse Dzongkhag in the south.



HOUSE FROM MERAK, TRASHIGANG

Merak is a settlement in the far east of Bhutan. Merak is under Sakteng Dungkhag, Trashigang District. The people are widely known as Brokpa, meaning 'highlander'. The main activities of these highlanders are raising of the domestic animals. Until 2012, Merak could only be reached by a two-day hike. In 2012 a new road was constructed that shortened the hike to one day. According to local legend, the surrounding valley is inhabited by Yeti.



HOUSE FROM SOPSOKHA, PUNAKHA

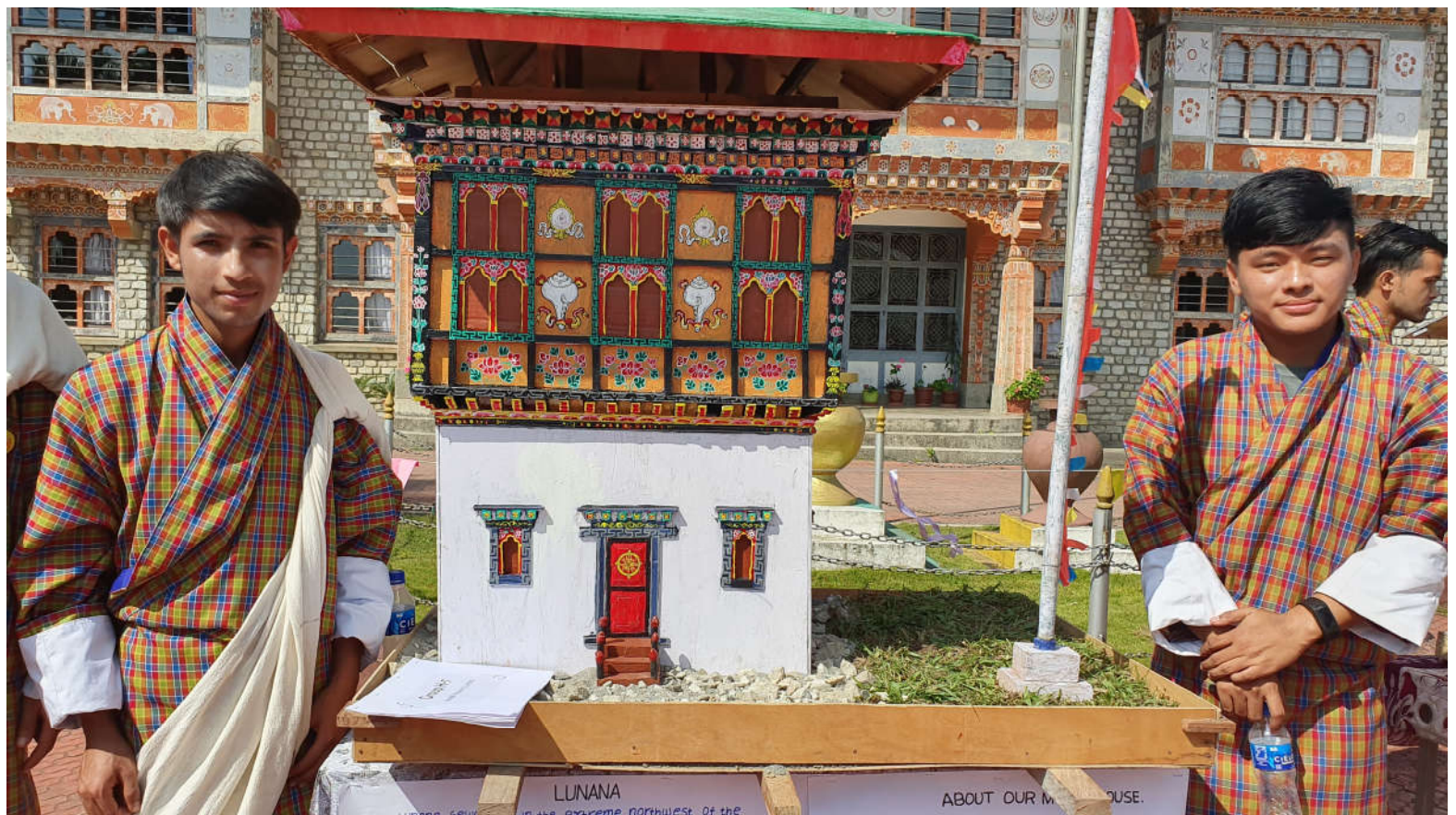
Sopsokha Village is popular for the only Fertility Temple in Bhutan. Chimi Lhakhang or the Temple of Fertility standing tall on a round hillock near Sopsokha village in Punakha is one of the most famous Buddhist temples in Bhutan



HOUSE FROM LUNANA, GASA

The valley of Lunana is the most remote of Gasa district. To see Lunana is to experience the culture of the Himalayan people residing amongst the glaciers.

The people here make their living from yaks and sheep. The nomads here know a lot on medicinal herbs and have benefited a lot from cordyceps harvesting. This wonder worm (*Cordyceps sinensis*) has given the nomads an extra income which will eventually lead to preservation of this nomadic culture.



HOUSE FROM MENDREL GANG, TSIRANG

Mendrelgang is one of the fast developing Gewog in Tsirang Dzongkhag. Economically, the people of the Mendrelgang Gewog are doing well and their live mostly depends on agriculture and livestock farming. They also grow oranges, cardamom and various fruits as their main cash crop. Besides the cash crops, they also grow vegetables and make a living by selling them in other Dzongkhag.



HOUSE FROM TENDU, SAMTSE

Tendruk Gewog under Tashichholing Dungkhag is located to the north-west of the Samtse Dzongkhag and is bordered by Nor-gaygang gewog in the northwest, Namgaychholing gewog in the east, Haa Dzongkhag in the north and Indian State of West Bengal in the southwest.



HOUSE FROM GASA

Gasa, the northernmost district of the country adjoins the districts of Punakha, Thimphu and Wangdue Phodrang and with Tibet to its north. This starkly beautiful region with elevations ranging from 1500 to 4,500 m experiences extremely long and cold winters and short but beautiful summers.

This region is inhabited by the Layaps; nomadic herders with a unique culture. Their main source of revenue comes from trading products made from their yaks, such as yak hair textiles, cheese, butter and yak meat. They also harvest and sell Cordyceps, (a fungus of extremely high value that is frequently used in oriental medicine). The majority of the known herds of wild Takin also occur in Gasa. Gasa is famously known for its inhabitants, the Layaps, and for the Snowman Trek - one of the most challenging treks in the Himalayas. The newly established festival called the Royal Highlander Festival is becoming more popular each year.



LA PEPA BRIDGE, SPAIN

The Constitution of 1812 Bridge, also known as La Pepa Bridge is a new bridge across the Bay of Cadiz, linking Cadiz with Puerto Real in mainland Spain. The bridge has a total length of 3,082 m, which makes La Pepa the longest bridge of Spain. The main structure is the cable-stayed bridge that spans the shipping channel and its side spans. It has a total length of 1,180 m . The deck is a trapezoidal composite box girder with a depth of 3 m designed to be light-weight, aerodynamic and slender .



GOLDEN GATE BRIDGE

The Golden Gate Bridge is a suspension bridge spanning the Golden Gate, the one-mile-wide (1.6 km) strait connecting San Francisco Bay and the Pacific Ocean. The structure links the U.S. city of San Francisco, California the northern tip of the San Francisco Peninsula to Marin County, carrying both U.S. Route 101 and California State Route 1 across the strait. The bridge is one of the most internationally recognized symbols of San Francisco, California, and the United States. It was initially designed by engineer Joseph Strauss in 1917. It has been declared one of the Wonders of the Modern World by the American Society of Civil Engineers.



AMOCHHU BRIDGE

This 175 m Amochhu bridge has a unique feature of the 3D-parabolic semi-through steel arch bridge, the longest in the country, and the scenic beauty are some of the reasons why tourists are attracted to the spot.



THIMPHU FLYOVER BRIDGE

Thimphu is the capital of Bhutan with a population of approximately 100,000 people. It is the largest town in Bhutan, about an hour from the airport in Paro. As you enter the valley, you drive on Bhutan's first four-lane expressway, which takes you right into the heart of town, over two dramatic flyover bridges.



CANTILEVER BRIDGE, PUNAKHA

The new Cantilever Bridge of Punakha in the Kingdom of Bhutan the unique project of "Pro Bhutan, Germany" to marry medieval Bhutanese bridge architecture with modern technology. The new

Cantilever Bridge of Punakha in the Kingdom of

Bhutan, planned, built and financed by "Pro Bhutan, Germany"

was inaugurated by

H.E. Jigmi Thinley, Prime Minister of Bhutan

and

Harald N. Nestroy, German Ambassador (rtd),

Executive Chairman of "Pro Bhutan"



NEW BRIDGE FOR BHUTAN - RANGLUUG TOWER BRIDGE

A prototype designed by students that infuses Bhutanese Architecture with modern technology. The bridge has an appellation as the “ Rangluug Tower Bridge “



MAHATMA GANDHI SETU BRIDGE

Mahatma Gandhi Setu (also called Gandhi Setu or Ganga Setu) is a bridge over the river Ganges in Bihar, India, connecting Patna in the south to Hajipur in the north. Its length is 5,750 metres and it is the third-longest river bridge in India. It was inaugurated in May 1982 in a ceremony in Hajipur by the then prime minister, Indira Gandhi.



NETWORK ARCH BRIDGE, SAMDRUP JONGKHAR

The bridge, built over Dungsamchhu, connects the Thromde to the Samdrup Jongkhar-Trashigang highway. Unlike other bridges that have archs made of metal, the arch in this bridge is made by concrete.

The 55-metre long bridge has a carrying capacity of 70 metric tons. It was built by Construction Development Corporation Limited.



BHUTANESE BAZAM OR WOODEN CANTILEVER BRIDGE

In Bhutan, with her unlimited number of rivers and gorges, all kind of bridges were built since times remembered. Bazams or wooden Cantilever Bridges were invented for situations where wooden single-span bridges were not sufficiently long to span a river. The limit for such bridges was about 10 meters.



