

1975-2015

40 YEARS ON

HELVETAS SWISS INTERCOOPERATION BHUTAN
CELEBRATING FOURTY YEARS OF
DEVELOPMENT PARTNERSHIP WITH BHUTAN



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HELVETAS Swiss Intercooperation Bhutan
Celebrating Forty Years of Development Partnership

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Published by HELVETAS Swiss Intercooperation Bhutan
Dungkar Lam, Lower Motithang, Thimphu

Phone +975 2 32 28 70 | **Fax** +975 2 32 32 10

Email Helvetas@druknet.bt

Website www.bhutan.helvetas.org

Exhibition 'Tradition and Innovation in Architecture': Edited by Hanspeter Buergi, in close collaboration with Fritz Baumgartner and HELVETAS Swiss Intercooperation with contributions from Felix Siegrist; Advisory Committee (in alphabetical order): Rajni Chavda, Nagtsho Dorji, Lhendup Dorji, Dorji Yangki, Phub Zam; Photos (in the Exhibition) by: Yeshey Dorji, Markus Wild, et al.

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Photo, front cover: Veterinarian J. Cantieni, Ap. Sonam and late Kunzang Dorji, the Gup of Tang gewog at the first Cattle show in Mistang (1982), taken by Walter Roder



HELVETAS Swiss Intercooperation is an international network of independent affiliate members working in the field of development cooperation and emergency response. The HELVETAS network builds upon six decades of development experience. Its 1,600 staff members work in over 30 countries. The affiliated members share a common vision and mission. They adhere to one common strategy built on defined working approaches and thematic areas of intervention.

HELVETAS Bhutan is one of the decentralized country programs of HELVETAS Swiss Intercooperation which has been operating in Bhutan under an agreement with the Royal Government of Bhutan since 1975. It implements its programs and projects in three of HELVETAS' five thematic areas through local partners at both national and local levels. HELVETAS Bhutan builds on opportunities arising from the democratization process by creating spaces for disadvantaged men and women and by promoting equitable shares in social and economic benefits.

The celebrations to mark the longstanding partnership between Bhutan and Helvetas are dedicated to His Majesty, the 4th Druk Gyalpo Jigme Singye Wangchuck, on the occasion of his 60th birth anniversary.



Photo: Markus Wild



Photo: Markus Wild

FOREWORD

HELVETAS Swiss Intercooperation is celebrating 40 years of development partnership with Bhutan in 2015. Telling “the whole story” of such a partnership in one event, or through one publication, is not possible. We, therefore, chose a topic that may be surprising to many: Architecture. And we linked it with Construction and Vocational Education and Training in the construction sector, themes that are important complements to Architecture, and the latest addition in HELVETAS’ project portfolio.

Architecture was chosen because we were told by many Bhutanese that they liked the buildings created under the Bhutan-Helvetas collaboration. That the expressions of these buildings connected well with their and the country’s identity. The theme Architecture also allows us to focus on what a development partnership has achieved under the GNH pillar ‘Preservation and Promotion of Culture’, and to question how we have fared in blending the highly refined local traditional architecture with modern functional needs and construction techniques.

The six institutions whose infrastructure we have chosen to present in a week-long expo and in this booklet are institutions of national significance. Institutions are essential for nation building. And the question whether the six institutions developed over the last 40 years have been addressing the pressing and changing needs of the country and its people is a policy question of prime importance.

Creating Architecture sensitive to local identities, and building institutions responsive to society’s evolving needs are complex themes. The events organized and the small publication created to commemorate the 40th anniversary of a development partnership

are but modest contributions to a dialogue and discourse that we hope will continue in varied ways in Bhutan and in Switzerland. This would be a great achievement, because the objective for our anniversary program was to not “only” look back, but to mainly deal with few select themes of the present and the future.

The timeline of landmarks, milestones, and achievements of the 40 years of development partnership between Helvetas and Bhutan aims to take us back into the history, up to the present days. The overview is meant to be a tribute to the many Bhutanese and Swiss actors who have demonstrated that planned development can achieve good results.

The booklet in your hands concludes with personal contributions of personalities from two generations who shaped and will continue to shape development in Bhutan. The experience of the beekeeper Fritz Maurer is perhaps what illustrates the Helvetas and Swiss contribution to Bhutan’s development best: It is a combination of an entrepreneurial attitude with practical and conceptual intelligence, eager to learn from knowledge institutions for better practices. These hallmarks, including many personal partnerships and engagements, have been the main ingredients to the achievements of the 40 years of Bhutan-Helvetas collaboration.



Hansruedi Pfeiffer

Country Director of HELVETAS Swiss Intercooperation Bhutan

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INTRODUCTION

RAISING THE FLAGS

The year 2015 marks 40 years of development partnership between Helvetas and Bhutan, a partnership that has set a clear example on how like-minded people, no matter how far apart they may stand, could come together to work towards the upliftment of human conditions.

The roots of Bhutan-Switzerland ties date back to 1950s when a personal friendship developed between the Third King, His Majesty Jigme Dorji Wangchuck, and a Swiss entrepreneur Fritz von Schulthess. This laid the basis for common development efforts.

Swiss assistance to Bhutan began on a private initiative, and later through the 'Foundation Pro Bhutan' and since 1975 through Helvetas. Since then, a deep and fruitful collaboration has emerged in agriculture, forestry, health, education, rural infrastructure and more recently in good governance.

Helvetas partners with farmer groups and co-operatives, civil society organisations, local governments, central government agencies, and the private sector in alignment with the Royal Government's priorities as Bhutan goes through rapid social, economic, and political transformation.

In 2011, after the merger of Helvetas and Intercooperation into HELVETAS Swiss Intercooperation, a new Country Strategy (2015-2017) was launched. The Strategy aims to contribute towards equitable development and improved livelihoods through promotion of effective governance, an active civil society, and sustainable economic opportunities.

To mark 40 years of development partnership, HELVETAS Swiss Intercooperation is organising an

Exhibition with architecture as the main theme as Switzerland has strongly engaged in contributing to institution building in Bhutan.

The Exhibition includes a timeline tracing the birth of Bhutan-Switzerland ties and its evolution through the decades. A 10-minute documentary focusing on current HELVETAS Swiss Intercooperation projects will be screened at the opening of the Exhibition.

As side events, panel discussions will be hosted on two separate evenings on architecture and vocational education in Bhutan to which Helvetas is seeking to make meaningful contributions. This booklet also features personal narratives from different individuals.

We hope the Exhibition will engender some appreciation of this partnership and will provide a platform to promote joint learning and experience sharing between the two peoples of these mountainous countries.

HELVETAS Swiss Intercooperation would like to express its gratitude to His Majesty the King, the people and the Royal Government of Bhutan for the opportunity to be a partner in Bhutan's development story.

HELVETAS SWISS INTERCOOPERATION'S BHUTAN PROGRAM IN 2015

Since embracing planned development in 1961, Bhutan has made significant progress in improving the quality of life of its citizens. This has been possible with sound social sector policies, especially the sustained investments in health and education sectors. Take this spectacular leap in life expectancy, for example: 37 years in 1960 to 68 in 2014.

Yet, even as the country continues to make substantial development gains, it also continues to face new challenges. Poverty is still prevalent, especially in rural areas. Unemployed youths continue to look for work, effects of climate change are becoming more perceptible, and the country's structurally weak economy hinges primarily on hydropower and tourism.

Beyond historical coincidences and interventions from multilateral development partners, the deep friendship that Bhutan sought and nurtured with countries like Switzerland has marked its own contour in the country's steady progress.

Today, HELVETAS Swiss Intercooperation's engagement in Bhutan is guided by its mission to "build on opportunities arising from the democratisation process by creating spaces for disadvantaged women and men and promoting their equal share in social and economic benefits".

Therefore, within the ambit of this mission, and in close alignment with Bhutan's priorities, HELVETAS Swiss Intercooperation works in three areas of Rural Economy, Skills Development and Education, and Governance, Peace and Culture. The overall goal is to reduce multi-dimensional poverty and youth unemployment, promote value chain in agriculture and forestry, and strengthen democratic practices.

Rural Economy

In Bhutan, the poorest often live in the most inaccessible parts of the country, eking out a living through subsistence farming, cut off from markets, and with reduced access to basic public services. The challenge is to get these farmers out of the poverty cycle by building their capacity and initiating activities that improve their livelihoods. This means introducing sustainable agricultural practices, extending market value chains to their fields, and making them the managers of the natural resource in their surroundings.



Photo: Markus Wild

HELVETAS Swiss Intercooperation works with the Ministry of Agriculture and Forests to achieve these goals. Adopting a multi-pronged approach through three complementary projects – Rural Livelihood Project, Rural Development Training Centre, and Participatory Forest Management Project – the objective is to reduce income poverty and provide employment opportunities for rural youths. This is being done by encouraging farmers to produce surplus for cash income, fostering innovative business ideas by supporting rural development initiatives, and creating forest-based livelihood opportunities

through sustainable utilization and management of natural resource. Farmers are trained in livestock, vegetable, horticulture production, and small-scale farm business management. Democratic principles of micro-governance and gender equity measures cut across the various themes of these projects.

Successes so far:

- Dairy production has been substantially enhanced
- More farmers have taken up semi-commercial poultry production
- Production of fruits and vegetables has reached a new scale
- RDTC has become an established institute promoting training programmes for rural development
- Community-based forest management is now a common practice
- Diverse social forestry and forestry extension services are available in dzongkhags and gewogs

Skills Development and Education

Bhutan's achievements within the realm of general education has been impressive. However, a number of caveats remain, as evidenced by the hundreds of university graduates who fail to find jobs. Consequently, the youth unemployment rate stands rather tall at 10%. The main concerns are the quality and standards, equity gaps, and the paucity of skilled personnel that the employers demand. With a new emphasis on the vocational training sector from the Bhutanese government, HELVETAS Swiss Intercooperation intends to contribute significantly towards skills development of the Bhutanese jobseekers.

The two projects - Education in Rural Bhutan Project, and Occupational Skills Development for Construction Sector - are geared towards enhancing access and quality of basic education, there-

by leading to the creation of a market-responsive skilled workforce. The emphasis is on retention of girls in schools, equitable access to quality primary and secondary education in rural Bhutan, skills development of young school-leavers, and building linkages with the construction industry. The long-term goal is to secure the income and careers of Bhutanese construction workers and promote recognition among employers for the competencies of graduates from the Technical Training Institutes.



Photo: Mitja Rietbrock

Successes so far:

- More girl students have access to boarding facilities and improved sanitation facilities
- Teacher resource centres as a means of decentralizing teacher training has been revamped
- Technical instructors have been trained
- Facilities of the training institutes have been improved
- Employers are engaged to guide the institutes in practical training
- Linkages have been established with training institutes in Nepal

Governance, Peace and Culture

Both as a country and society, Bhutan stands on a unique cusp. The new democratic culture calls for new social nuances and institutions to help anchor the principles of democracy and self-governance. This means building new institutions and strengthening existing ones, and at the same time leveraging the country's culture and tradition to promote

awareness, understanding, and local stewardship. HELVETAS Swiss Intercooperation's engagement in this area – Support to Local Governance Project, Strengthening the Civil Society Sector, and Bhutan Swiss Archaeology Project – aims to contribute towards the goals of improving service delivery, strengthening democracy and governance, and enhancing the study and conservation of cultural heritage. This would mean strengthening civil society organizations, deepening citizen engagement in local governance, and preservation and promotion of culture. Challenges are aplenty, though, in the form of low capacities of local governments in the face of growing responsibilities, relative infancy of civil society organizations, and the general lack of capacity in the field of archaeology. The focus, therefore, in this theme is contributing towards long-term governance processes, systems and strategies, and institutionalizing archaeology.



Photo: Markus Wild

Successes so far:

- Contributed towards ensuring access to small-scale funds, legal assistance in registration processes, and capacity support for emerging CSOs
- The concept of citizen engagement in obtaining accountability from elected representatives has been introduced
- Elected local leaders have been trained in planning and prioritizing development plans
- Supported Institutional capacity of partners, including strategic framework of Department of Local Governance
- Surveys, excavations, and publications have been completed in several areas in Bumthang's Drapham Dzong, Sangkha ruins in Sarpang, Obtsho Dzong in Gasa, and the Chubjakha Dzong in Paro

A TIMELINE THROUGH 40 YEARS OF DEVELOPMENT PARTNERSHIP

40 years on | 1975 - 2015 Helvetas Bhutan

Celebrating Forty Years of Development Partnership

2015 marks 40 years of successful development partnership between Bhutan and Helvetas. This Timeline captures major milestones, landmarks, and outcomes of a partnership between two countries that has transcended the traditional definition of a donor-recipient relationship.

We hope you enjoy reading about the trailblazing efforts made by the people of Switzerland and Bhutan for the upliftment of human conditions through modern development interventions.

www.helvetas.org/bhutan



1952

Swiss entrepreneur and friend of Bhutan Fritz von Schulthess and family visit Bhutan

1955



On 18 June, in the Zurich "Limmathaus", 13 women and 41 men founded an organization as an expression of strong civic engagement that was later renamed Helvetas. The then 26-year-old agronomist from Bern, Dr. Martin Menzi, was amongst the founding members of Helvetas

Helvetas is founded as the first private organization for development cooperation in Switzerland

1965

Swiss support to Bhutan begins through private channels of Fritz von Schulthess

1970



Fodder trainees in 1981

400 kg of four varieties (Desiree, Maritta, Cosima, and Tasso) of wart-resistant potato seeds arrive from Switzerland

Programme to improve pasture and fodder availability for crossbreed animals begins

1953



Fritz von Schulthess with Her Majesty the Royal Grandmother and His Majesty the Third King in Cham, Switzerland

First visit of His Majesty the Third King and the Queen to Switzerland for the delivery of Ashi Sonam Choden Wangchuck at Zurich hospital Hirslanden

Der junge Koenig war durch die Sauberkeit, die Ordnung, die Schaffensfreude der Menschen, die Industrialisierung der Schweiz sehr beeindruckt. Dieser erste Aufenthalt bildete die Grundlage nicht nur seiner Anhaenglichkeit an die Schweiz, sondern auch seiner engen Freundschaft mit Monica und mir (Fritz von Schulthess, Erinnerungen, III. Teil Bhutan, 1982).

The young King was impressed with the cleanliness, the order, people's work ethic and the industrialization of Switzerland. This first visit laid the foundation not only for his bond with Switzerland but also for his close friendship with Monica and myself.

1961

Planned development begins in Bhutan with the launch of the first Five-Year Plan (1961-1966)

1962

Bhutan joins the Colombo Plan

1967

First Bhutanese forester (later the Chairman of the Planning Commission in the rank of a Minister) Lyonpo C. Dorji visits Switzerland for an exchange in forestry management; a few years later, Prof. F. Fischer visits Bhutan; these exchanges contribute to the development of a national Forest Act and Forestry Policy

Swiss veterinarian Dr. Eberle visits Bhutan to study unusual giddiness amongst yaks, marking the beginning of Swiss assistance in animal husbandry



First Bhutanese Forester Lyonpo C. Dorji

1969

Bhutan adopts the Forest Act

1972

HM the Third King passes away on 21 July

1974

Bhutan formulates a national Forestry Policy, with significant contributions from exchange visits of Lyonpo C. Dorji and Prof. F. Fischer

1976

The last Swiss expert in Gogona leaves for Switzerland; the government of Bhutan takes over the extension services



Formal opening of the Dairy and Forestry Project in 1976

HRH Prince Namgyel Wangchuck and Mr. and Mrs. Fritz and Monica von Schulthess open the **Dairy and Forestry Project** (DFP, then called the "Aum Monica Project") with its activities in livestock, forestry, and agriculture.

1978



Werner Kuelling with Dashi Jambay Ngedup and Karma Tobden at the agro-mechanical workshop

First visit to Bhutan of Secretary General Werner Kuelling of Helvetas Zurich



First suspension bridge connecting Wangdichoeling with Batpalathang

Batpalathang-Wangdichoeling suspension bridge marks the beginning of a major engagement in rural infrastructure

Construction of Phobjikha road begins with planning support from Helvetas

Selective felling of trees and logging is demonstrated in Bumthang and Changkaphu

1971



His Royal Highness Namgyel Wangchuck with 60 bulls from India



Swiss cattle in Bumthang

Import and transport of Brown Swiss cows from Kerala, India, to Gogona



Batpalathang, the Swiss project area

First contacts with Bumthang: HM the Third King expresses his wish to take up development work in Bumthang, which at that time was one of the most backward districts in the country

Foundation Pro Bhutan is set up by Fritz von Schulthess to put assistance to Bhutan on a more sustainable basis

On September 21st, Bhutan is admitted as a member of the United Nations

1973

Dr. Martin Menzi, a founding member of Helvetas, visits Bhutan



Bumthang Hospital ambulance

A small-scale mobile health clinic is set up in Bumthang, Zhemgang, and Trongsa - a first step of Swiss support to the health sector

1975

Helvetas takes over Foundation Pro Bhutan's activities

A first agricultural loan scheme is introduced in Bumthang, later taken over and implemented in 1988 on a countrywide basis by Bhutan Development Finance Corporation (BDFC)



Distribution of potatoes in Khaling, eastern Bhutan in 1975

Desiree from Gogona is distributed to farmers of Khaling in Tashigang, the same variety is grown at a national level today

1977

The overall responsibilities for forestry, agriculture, and livestock development are assigned to DFP in Bumthang



Fritz Maurer

Fritz Maurer is appointed District Agriculture and Animal Husbandry Officer



Lame Gomba

Lame Gomba becomes a center for project forestry activities

1980



Cable crane for sustainable timber harvesting

First cable crane starts operation to become the most important technology for timber harvesting on a national level



Dr. Pema Gyamtsho and Kesang Dorji in New Zealand

First medium-term training in fodder development sees Dr. Pema Gyamtsho (Opposition Leader) and Kesang Dorji leave for New Zealand

1983



Potato planting and screening of seeds; potato fields in Chamkhar in 1982

Successful activities in Gogona in the potato development sector culminate in the launch of a **National Potato Programme**



First Helvetas office, Thimphu in 1983

Helvetas Coordination Office is set up in Thimphu with Ernst Reinhardt as the first resident coordinator



Tashila Ropeway

Tashila Ropeway is inaugurated; today, it operates as a private enterprise

Lame Gumpa trains 267 (technical) foresters; many become forest entrepreneurs (loggers, cable crane operators, chain saw operators)

Bhutan holds first development partners Round Table Meeting in Geneva, Switzerland

1985

The primary health care programme in Bumthang becomes a model for the national programme

Construction and maintenance of pedestrian trail bridges begins with the start of the **Suspension Bridge Programme** which includes intensive skills building for national partners

Bhutan and Switzerland establish diplomatic relations, with Switzerland becoming one of the main development partners

1987



Helvetas and the Government of Bhutan signing an agreement in the late 80s

Livestock activities of DFP and **Rural Livelihoods Project (RLP)** continue at national level through integrated livestock and fodder development programmes

1979

His Majesty the Fourth King commands the Forest Department to start a Social and Community Forestry scheme primarily to produce food and fodder, meet the fuel wood demand of households, and discourage illegal felling of trees

1981



His Majesty the Fourth King inspecting Swiss projects in Bumthang in 1981



HM the Fourth King travels to Bumthang to visit Swiss supported projects

Kuensel Article on Swiss Assistance



1984

A public survey in Bumthang documents appreciation of Swiss activities and approaches (people's participation/good governance) and critical observations such as paternalistic conduct

1986

Helvetas signs an agreement with Swiss Agency for Development and Cooperation (SDC) to implement all its programmes in Bhutan

The concept of Forest Units for forest management is adopted for national execution; it becomes an economically viable model operating till date

1988



Signing of agreements

Privatization of cable crane units, sawmill, agro mechanical workshop, vehicle workshop, etc. of Helvetas programs as a measure to establish economically viable enterprises; funds generated through privatization becomes small scale development revolving fund which is incorporated within BDFC in 1988



Improved smokeless stoves

Research and development works (for example, improved iron bukharis) and trainings imparted in Bumthang contribute to the spread of small and medium enterprises across the country as agro mechanical and vehicle workshops, etc.

1989

Engagement in primary education begins with four Bhutanese educationists visiting Zurich (current Honourable Speaker Jigme Zangpo, former Vice Chancellor Dasho Pema Thinley, Pema Lhazom, and Gopi Chettri)



Wangdichoeling Hospital, first phase of construction

Construction of Bumthang Hospital marks a starting point to combine traditional Bhutanese architecture with modern functions/features in the development of several institutions of national significance to follow till 2014

1993

Expansion of the then Paro Teacher Training College (now Paro College of Education) begins, mainly to increase trainee intake capacity for nationalization of the education sector and to achieve the MDG of 'Education for All'



Swiss meeting in Bumthang (mid 80s)

Swiss presence in Bumthang peaks with 15 families living and working there

1995

Helvetas starts engagements to foster good governance in new sectors, with comprehensive human resource development programs in finance and audit. This engagement contributes towards establishing a cadre of trained financial personnel in all tiers of the government, and in enhancing the capacity of the Royal Audit Authority, the primary auditing authority in the country



Stone laying at RNR-RDC Jakar

Swiss programming input and investments for an integrated Renewable Natural Resources (RNR) research system leads to the establishment of four research centres in Yusipang, Bajo, Jakar, and Khangma

Switzerland contributes CHF 5 million to the building of Bhutan Trust Fund for Environmental Conservation

1997

Beekeeping as one of the first successful associations is established, laying the foundation for a sustainable honey industry in Bhutan; this is the result of a complex development process, including the import of *Apis mellifera* bees from India in 1986



Beekeeping project in 1997

2000

The Society Switzerland-Bhutan is founded in Switzerland, followed by the Bhutanese sister organization Druk-Switzerland Thuendrel Tshogpa a year later

1990

SDC in collaboration with ETH Zurich supports 7 PhD candidates, who today hold important international and national positions in the natural resources management sector

1994

Following extensive staff and curriculum development and construction work, and the admission of the first batch of students in 1992, Helvetas hands over the "keys" of Natural Resource Training Institute (NRTI) to His Majesty the King, the then Crown prince of Bhutan



Formal opening of NRTI Lobesa by His Majesty the King

1996

Following Swiss technical assistance to the Technical & Vocational Education and Training sector through an Asian Development Bank (ADB) project, the **Skills Development Project** was launched, training a few hundred Bhutanese youth for gainful employment as plumbers, electricians, mason, cooks, etc.

1998

With a focus on improving teaching and learning in schools and strengthening administration and management of the education system, Helvetas begins its interventions in secondary education, with strong conceptual and financial support of SDC

Helvetas's policy to execute projects through national partners and the Government's request to development partners for thematic concentration results in noticeable national execution of projects along with program consolidation on three focus areas: **Renewable Natural Resources, Rural Infrastructure, Education and Culture**

HM the Fourth King dissolves the old Cabinet and proposes vote of no confidence by the National Assembly; a new Cabinet is elected and HM the Fourth King steps down as Head of Government

2002



Formal opening by His Majesty the King and Werner Kuelling in 2002

Following six years of planning and construction, Punatshangchhu Bridge in Wangdue is inaugurated

Earlier RNR extension projects in Bumthang and Trongsa are expanded to Sarpang and Zhemgang districts following a poverty report of ADB; this initiative is still ongoing as the Rural Livelihood Project in Zhemgang and Sarpang districts



Community Forest Management Groups (CFMGs) harvesting timber; Interview of a female member of a CFMG to take the post of a CF executive member; CFMG electing a network president, secretary, and treasurer

The consolidation of 25 years of experience and policy lessons in the forestry sector leads to the National **Participatory Forest Management Project (PFMP)** which runs till date with 612 established Community Forests and Forest Groups

2005



Bridge over the Illgraben in Wallis, Switzerland

Bhutanese technology is transferred back to Switzerland for the construction of a suspension bridge over the Illgraben in the canton of Wallis as a mark of friendship that connects the two countries

First draft of the Constitution of Bhutan is released and discussed at high-level consultations

His Majesty the Fourth King announces abdication in favour of the Crown Prince on 17 December

2007



Punakha suspension bridge, photo: Markus Wild

The Swiss involvement in the Suspension Bridge Programme results in the construction of more than 250 safe river crossings and 51 rehabilitations till 2007, benefitting more than 300,000 people, about 40% of Bhutan's population



CSO Fair to provide a platform for local CSOs to showcase their work

Bhutan enacts the Civil Society Organisation Act, providing the legal framework for the emergence of more than 40 civil society organisations and the growing partnership between Helvetas and local CSOs

2009



Teacher trainees at the Paro College of Education in 1995

Support to teacher education covering infrastructure and capacity development results in creating an additional 500 study places for pre-service and in-service teachers and in improving the quality of teacher education through enhancing the curricula and teaching approaches and investing in teacher educators

National strategy for Community Forestry is developed and endorsed under PFMP

2001

An old traditional house restored as Folk Heritage Museum is inaugurated by Her Majesty the Queen Mother Ashi Dorji Wangmo Wangchuck on 28 July

2004



Classroom

More than two decades of engagement in primary and secondary school education results in significant contributions towards increasing accessibility and quality of basic education, including intensive partnership in teacher training between the Colleges of Education in Bhutan and Zurich University of Teacher Education; a follow-up program on teacher education in partnership with the two Colleges of Education in Paro and Samtse begins

Bhutan's development results in terms of Gross Domestic Product per capita and the Government's will for greater self-reliance lead to continued discussions within SDC and Helvetas on a gradual disengagement in Bhutan; this is partly revisited in 2008, when Helvetas and SDC are requested to stay engaged in the country's democratisation and decentralisation process

2006

NRTI becomes a College under Royal University of Bhutan; plans are approved for new degree programs; Swiss fear growing (academic) mission drift

2008

The joint SDC-Helvetas office becomes a Helvetas-only office



Instructor briefing RDTC trainees on harvesting of vegetables in 2015, photo: Yeshey Dorji

Federal Councillor Ruth Dreifuss and Secretary Dasho Sherub Gyaltsen, Ministry of Agriculture, inaugurate the Rural Development Training Centre in Zhemgang; between 2007 and 2013, over 1,000 youth are trained



Community meeting

Within national governance reforms and increasing decentralization, capacity support for local government leaders and their administration to take on their increasing responsibilities begins

His Majesty the King is crowned; Bhutan holds first democratic elections; the new Parliament endorses the Constitution

2011

Partnership with CSOs gains momentum, and engagement with local governments results in building decentralised decision making capacities of block level local governments

Helvetas and Intercooperation merge to form HELVETAS Swiss Intercooperation (HSI)

2013

Bhutan holds second democratic elections, a new government takes office



Trainees at a technical training institute in 2013, photo: Miga Rietbrock

Trainees at the Vocational Training Institute in Chumey in 2015, photo: Yeshey Dorji
New skills development programme for the construction sector is launched

2015

2010

From 1992 till date a total of 574 forest field staff graduate with a pre-service diploma from College of Natural Resources; all the graduates till the 20th batch (2012) have been absorbed by the Government; however, starting from the 21st batch, some graduates have remained unemployed, chiefly because the intake of CNR graduates in the Government has reached a point of saturation, and opportunities elsewhere are limited

2012

HELVETAS Swiss Intercooperation's new Country Strategy (2015-2017) for Bhutan focuses on Governance, Rural Economy, and Education and Skills Development

SDC opens new office in Thimphu

2014

Draft solid waste management strategy and regulation including "zero waste principles" finalized by National Environment Commission with HELVETAS Swiss Intercooperation/skat (Swiss Resource Centre and Consultancies for Development) support



Archaeological excavation at the Dapham Dzong in 2008

10 years of Bhutan-Swiss collaboration in archaeology contributes to the establishment of a fully capacitated Section under the Division for Conservation and Heritage Sites, the drafting of a Heritage Sites Bill, the publication of the first journal on Archaeology in Bhutan, and the partial excavation and documentation of Drapham and Chubjakha Dzongs

Assistance to Bhutan from 1975 to 2014 stands at CHF 157.5 million, with 51% coming from the Swiss Agency for Development and Cooperation as mandates (approx. 161 Mio. USD as on September 2015)

HELVETAS Swiss Intercooperation celebrates 40 years of development partnership with Bhutan



Helvetas Staff with His Majesty the King

Bhutan is on track to achieve many Millennium Development Goals

- Reduced poverty from 36.3% in 2000 to 12% in 2012
- 100% Gross Primary Enrolment Ratio likely to be achieved before 2015
- Girl's enrolment in the secondary education increased from 45% in 2002 to 53.5% in 2012
- On track to achieve the target to reduce under-five mortality rates by two thirds
- On track to achieve the target of reducing maternal mortality to below 140 per 100,000 live births by 2015
- 81% of the country has a healthy forest cover
- Almost universal coverage in the provisioning of safe drinking water

EXHIBITION TRADITION AND INNOVATION IN ARCHITECTURE

Featured Institutions

WANGDICHOEILING DISTRICT HOSPITAL, BUMTHANG

How it started

- In 1974, Swiss doctors set up a small three-room hospital in Wangdichoeling guesthouse
- In 1978, Bhutan signed the Alma Ata Declaration and introduced the primary health care to build a modern health system in harmony with its traditional medicine services, and with a strong emphasis on community participation
- The Helvetas-supported health programme became a viable primary healthcare system in Bumthang with major emphasis on comprehensive rural healthcare and preventive medicine, including components of traditional practices, in line with the national health policy
- In 1985, Bumthang was selected as the model for national public healthcare programme in Bhutan
- Helvetas roped in support from the three Swiss cities of St. Gallen, Winterthur, and Schaffhausen to build a new district hospital in Bumthang
- The construction of the 40-bed hospital started in 1987 and the new Hospital was inaugurated in 1990

Where it stands today

- The Hospital is fully integrated into the primary healthcare programme
- There is a perceptible change in awareness of the people regarding their health, the equal importance of preventive and curative medicine, and the values of traditional medicine
- Hospital Management Committee, responsible for the overall hospital management, has been established, and the people of Bumthang are represented through this Committee
- Hospital Administration and Management Transformation Team within the hospital has been instituted

COLLEGE OF NATURAL RESOURCES, LOBESA

How it started

- Human resource development was a priority of Swiss assistance to meet the shortfall of trained manpower in its areas of assistance
- In the late 1980s, the then Natural Resources Training Institute (NRTI) was planned to integrate Diploma level training in Agriculture, Animal Husbandry, and Forestry
- In line with the Government's aim to provide integrated extension services in the renewable natural resources sector, the

National Agriculture Training Institute, the Royal Veterinary Institute, and the Bhutan Forestry Institute were brought under one umbrella - NRTI - with Swiss assistance

- Following extensive staff and curriculum development and construction work, the first training course started in mid-1992
- In 1995, the first batch of 65 students graduated with Diplomas in Agriculture, Animal Husbandry, and Forestry
- In 2003, NRTI joined the Royal University of Bhutan (RUB) as an institute of higher education and was renamed the College of Natural Resources (CNR)

Where it stands today

- In its first 12 years, NRTI trained more than 1,000 young diploma graduates who are the frontline workers in the Ministry and Agriculture and Forests
- CNR has common courses across all programmes, and carries out research as mandated by RUB
- Within RUB, it has the most qualified faculty because of the human resource development support by Helvetas and the Swiss Agency for Development and Cooperation
- CNR offers three diploma programmes, five BSc programmes, and two Master's programmes

PARO COLLEGE OF EDUCATION, PARO

How it started

- The Government-established preschool care training centre in Paro was renamed Teacher Training Centre in 1985 with the start of a primary teacher training programme
- A major Primary Education Project was started in 1988 and included construction of a new teacher training college at Paro, curriculum development, textbook production, and non-formal education activities
- Zurich University of Teacher Education, Switzerland, provided technical assistance
- Helvetas took up the construction of the new Teacher Training College in Paro in 1993 with funding from the Swiss Agency for Development and Cooperation
- The main goal behind the Swiss support was to enable Bhutan to achieve the Millennium Development Goal of 'education for all' and increase trainee intake capacity of the Centre to 980 a year
- The Centre became a constituent college of the Royal University of Bhutan in 2003 and was renamed Paro College of Education in 2003

Where it stands today

- The College offers diploma, undergraduate, and postgraduate programmes for pre-service and in-service teacher candidates
- It has a Centre for Educational Research and Development to foster a culture of research and scholarship to improve development of education programmes and practices in the country
- The College has contributed to the gradual replacement of expatriate teachers with Bhutanese teachers in the country
- The College is ready to launch new programmes, including PhD in GNH Studies, and introduce specialized courses to attract international students

RURAL DEVELOPMENT TRAINING CENTRE, ZHEMGANG

How it started

- In early 2000, HELVETAS Swiss Intercooperation and the Government discussed developing a multi-disciplinary programme to provide training for income generating activities in livestock and vegetable production
- Targeting mainly young school leavers and farmers, the programme started at the College of Natural Resources in 2003
- Following staff and curriculum development and the completion of infrastructure, RDTC started operating from Zhemgang
- The programme consisted of agriculture apprenticeship, and training in farm business and rural development support services
- A new mandate of capacity building programme of farmer groups and cooperatives was added later on

Where it stands today

- The Centre provides training in agriculture and livestock production for early school leavers, capacity building training for office bearers of farmer groups, and agriculture/livestock awareness programme to students during winter and summer breaks
- Around 2,060 people have been trained so far, of which 567 are women
- It provides in-service training to extension officers and focal agriculture school teachers
- The Centre targets to train about 120 to 150 school leavers a year in dairy, piggery, poultry, mushroom, fruit, and vegetable production, and food processing

- A 2014 tracer study indicates 87% acquired competency to start an enterprise, and 60% said they have already started some farm-based enterprise
- Training opportunities are also provided to school agriculture clubs

RENEWABLE NATURAL RESOURCE RESEARCH AND DEVELOPMENT CENTRE, JAKAR

How it started

- Research in RNR sector did not exist for want of knowhow and qualified personnel
- From early 1990s, the Government emphasized developing research to intensify and diversify agricultural and horticultural production, and foster sustainable management of natural resources
- RDC Jakar was established as one of the four integrated RNR national research centres to cater to the East-Central Region with the national mandate of Livestock and Fodder research
- From 1995 to 2005, RDC-Jakar received Swiss assistance mainly in infrastructure and human resource development
- The Swiss assistance helped establish linkages with international research centers, and fund and facilitate the import of research materials from international agencies
- The project also funded archeological works and helped generate information of historical importance

Where it stands today

- RDC-Jakar is the major national livestock research and development centre under the Department of Livestock of the Ministry of Agriculture and Forests
- It also conducts research in other areas like field crops, horticulture, forestry, and farming systems in collaboration with other focal RDCs
- The livestock technologies developed and generated by the center immensely benefit the farmers
- The Centre is instrumental in improving productivity and efficiency of livestock breeds and their management practices

ROYAL UNIVERSITY OF BHUTAN, AUDITORIUM AND IT/LIBRARY, THIMPHU

How it started

- The Royal University of Bhutan was established through a Royal Charter in 2003 and became an autonomous university in 2011
- In the 11th Five Year Plan, the University has been asked to shoulder the aspiration of the government to create a knowledge-based society in Bhutan
- Towards this, the University has seen tremendous increase in student numbers and expansion of physical facilities; the construction of the auditorium, and information technology and library buildings at the office of the Vice Chancellor complex in Thimphu, are part of this initiative
- These state-of-the-art structures designed by an European architect were constructed with the meticulous supervision of HELVETAS Swiss Intercooperation

Where it stands today

- The facilities have already become an attractive venue for hosting important seminars, conferences, workshops, meetings and other forums of both national and international importance, besides providing the base for the institute for gross national happiness studies and being a centre for university learning and teaching
- The library building is also temporarily hosting the Jigme Dorji Wangchuck Public Library providing services to both the general public and youths of Bhutan
- Given their unique architecture and design, the structures are only one of their kinds in the whole of the Thimphu valley, if not in Bhutan, and as such they are continuing to attract and inspire young and aspiring architects and engineers in Bhutan
- Co-financed by Dr. Bridget Ibing, President of the Society for Promotion of Education and Training in Germany, HELVETAS Swiss Intercooperation and Royal Government of Bhutan, the buildings are symbols of true development partnership between Switzerland, Germany and Bhutan

WANGDICHOEELING DISTRICT HOSPITAL

BUMTHANG 1987 — 1989



Jakar in the Bumthang valley, with the District Hospital

The District Hospital in the Bumthang valley is a key element of an integral medical supply project and, with its central infrastructure, plays a critical role in reaching out to the primary health care through basic health units in the surrounding remote villages. The Hospital, located on the west side of the river, provides traditional Bhutanese as well as modern medicine. The two main buildings and several smaller infrastructure buildings, together with compound walls and courtyards, form the hospital complex. With its adapted scale and building typology, the use of local material and construction methods, and the traditional architectural language, the complex is well integrated into the context of the settlement. The main building is divided into two parts, one for each medical section and connected with an open arcade. A large corridor on the two levels, also used as waiting room, serves as circulation for the different rooms where stationary patients as well as ambulatory patients coming for medical check-up and treatment are taken care of.

WANGDICHOEELING DISTRICT HOSPITAL, BUMTHANG

Object: Wangdichoeling District Hospital, Bumthang

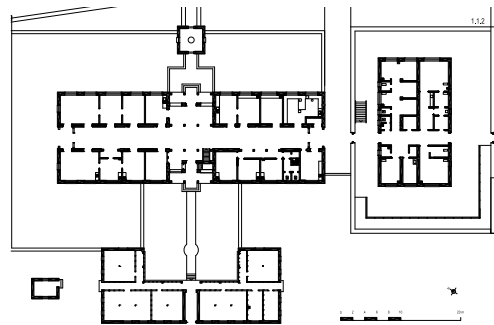
Planning and construction phase: 1987 - 1989

Client and building owner: MoH/RGoB

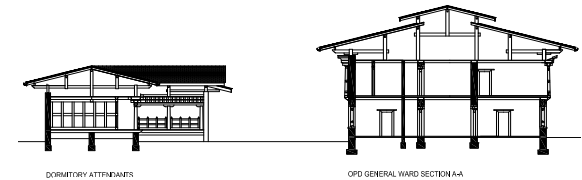
Realization: Helvetas, with a team of Swiss and Bhutanese architects and engineers, Bhutanese contractors, Bhutanese and Nepalese technicians, and Bhutanese and Indian workers



Wangdichoeling Hospital with main entrance



Ground floor plan with the main building and annexes



Dormitory Attendants Section (left),
OPD General Ward Section (right)



Typical in-patient room



Ramp for internal access connecting the two parts of the main building



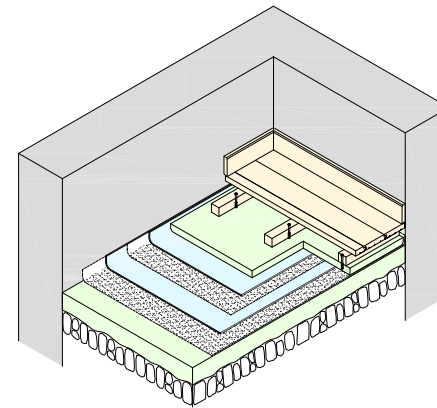
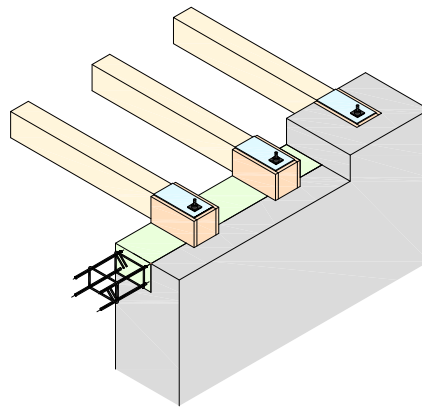
Wangdichoeling Hospital in the context of the settlement



The main and various annex buildings forming the Hospital complex



The planning process took into account various aspects of cultural integration, cost optimisation, and building processes specific to the functional use of the Hospital. Long-term planning was a very important aspect for ensuring the proper functioning of this institution. The choice of good building materials and a well-executed construction form the basis for a high-quality building with a long lifespan.



The first 3-D drawing shows the joints of the beams to the wall to prevent the wood from rotting and the second 3D drawing explains the different layers of the ground floor construction: Adding a water proofing of two layers hot bitumen and tarfelt with adequate overlapping prevents moisture from raising till the wooden floor.

FOCUS: MAINTENANCE

A special focus was set on the designing, planning, and execution of details such as the roof gutters, windows, foundations, and moisture protection. All these elements have been designed to lower maintenance costs and to ensure a long lifespan of the building. Moisture and water barriers were added at the right places to preserve the quality of the materials for a long period. Critical points were planned carefully and as far as possible made accessible for easier maintenance, e.g. sanitary installations with ducts and geysers as well as the roof water drainage pipes.



Cement Hollow Block production



Minor surgery room



Reception desk

BASIC SERVICES AND BUILDING CONSTRUCTION

The Hospital is the only one in the Bumthang district and therefore plays a very important role in ensuring the basic health needs of the region. In a social planning process including medical supply and changing requirements, the task of architecture goes beyond the good design of the building. The architecture for the whole infrastructure and for the basic services is driven by function, resulting in a form, which is combined with cultural heritage as another very important social component.



The Hospital in its cultural context and the administration



Corridor linking the two sections



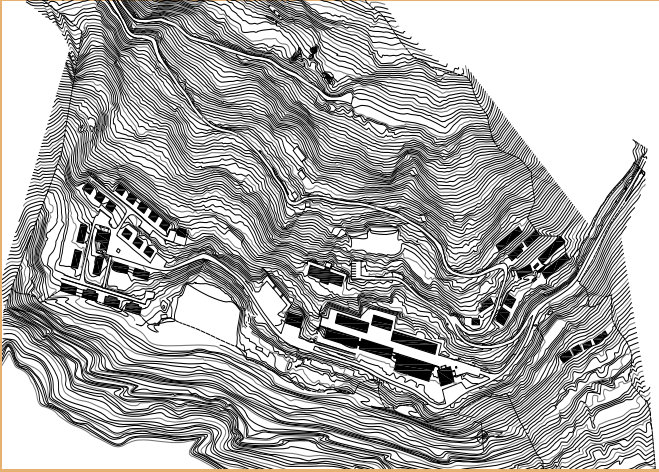
Traditional medicine section



Western medicine section

COLLEGE OF NATURAL RESOURCES

LOBESA 1989 - 1995



Lobesa valley with the campus on the hillside

The College of Natural Resources (former Natural Resources Training Institute / NRTI) comprises the three sectors of agriculture, animal husbandry, and forestry. The various buildings are located on the hillside above the Lobesa valley.

COLLEGE OF NATURAL RESOURCES

Object: College of Natural Resources, Lobesa

Planning and construction phase: 1989 - 1995

Client and building owner: MoAF/RGoB

Realization: Helvetas, with a team of Swiss and Bhutanese architects and engineers, Bhutanese contractors, Bhutanese and Nepalese technicians, and Bhutanese and Indian workers

Construction costs for academic buildings

and staff housing, 1989 -1995:

442 NU/square feet (plinth area);

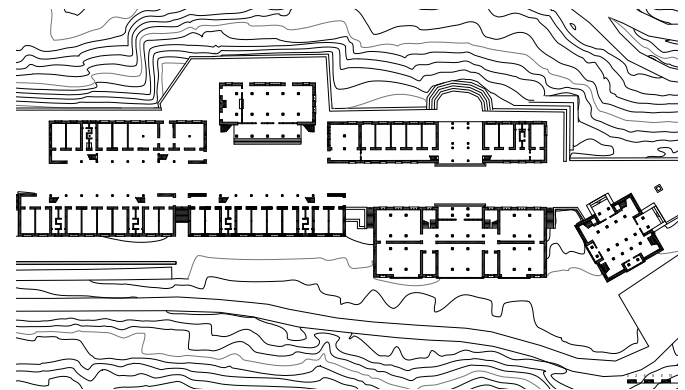
125,957 total plinth area in square feet;

NU 36/cft timber price/cubic feet (mixed conifer)

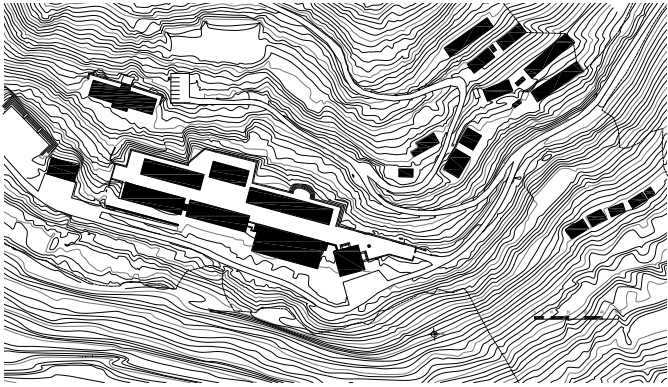


College of Natural Resources in the valley context

The large college complex consists of an academic section and its infrastructure, built in the first phase, and the staff housing added in the second phase. The entrance to the academic compound is marked by a convention hall, inspired – as was the entire building and spatial concept of the campus – by the traditional Dzong, e.g. the nearby Wangduephodrang or Punakha Dzongs.



Ground floor plan of the academic buildings



Academic area of the College

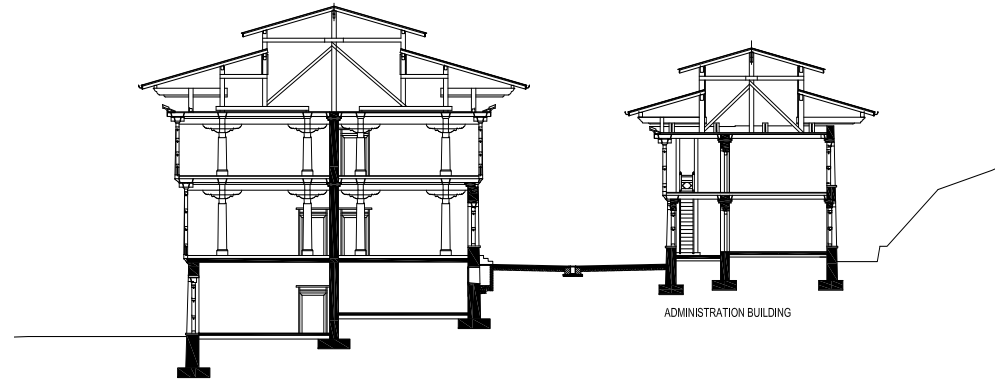
As is common in the local architecture, timber, stone, and rammed earth are the main construction materials used for the new buildings. The visible timber is crafted and painted in traditional techniques to give a familiar and rooted atmosphere to the place. The innovations lie in the organisation of the space, in the larger scale of the buildings and construction dimensions as well as in the subtle changes of details adapted to the specific functions. For example, some reinforced concrete features such as concrete bands connecting joists have been used for structural strengthening and higher earthquake resistance.



Typical student hostel room



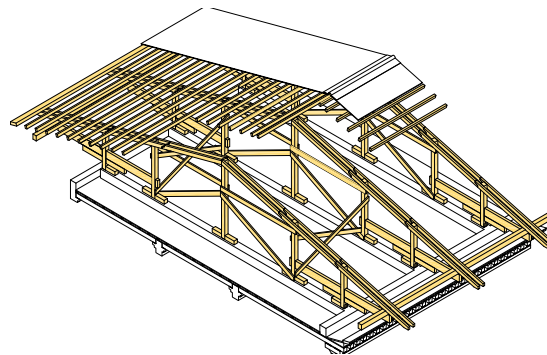
Courtyard of the academic complex



Section with school building (left) and administration building (right)

FOCUS: TIMBER

A special focus of this project lies in the use of timber. Timber is a regionally available natural resource, which needn't be imported. Wood is also an excellent material for use in earthquake zones as it is flexible and lightweight. Most of the timber was seasoned on site to prevent the wood from bending and cracking and to reduce damage from insects. The manually and industrially cut, well-seasoned timber construction includes the large wooden truss on the roof as well as the ekra wall, and the window and door elements. Different techniques were used to prevent the rotting of wood at the point of contact with other materials, such as stonewalls, by leaving a gap or using waterproofing layer and styrofoam to protect the wood. It was possible to achieve these traditional techniques with mostly Indian manpower, chiefly because of integral planning, detailing, and supervising.



3-D drawing of the roof timber construction: Stabilising the roof structure by diagonal bracings in both directions and improving the truss construction allows to build lighter wooden roof structures and saves up to 20% timber



Ekra wall and roof construction



School building, guesthouse, and staff housing



Courtyard with students



Corridor in the administration building

ARCHITECTURAL AND CULTURAL HERITAGE

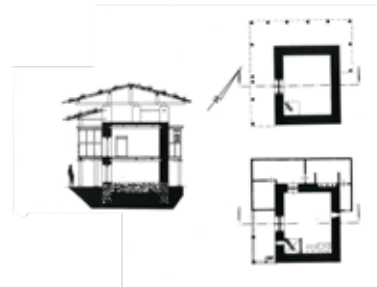
The architectural quality of the College of Natural Resources lies in the way it deals with the cultural heritage and traditional aesthetics of Bhutan. This way of combining traditional construction techniques and consideration of the local heritage with innovative interpretations and solutions is in fact the ambition of every project designed and built in close collaboration with local counterparts by Helvetas. Particular cultural references have been Dzongs, for the spatial concept, layout, and organisation of a school campus. Vernacular principles of traditional settlements and farmhouses are sources for building typologies as well as for construction principles, materialisation, and detailing. Such vernacular architectural elements combined with the needs of new functions, such as school buildings and staff housings, have been gently re-interpreted in simple and efficient technical solutions in order to create a place of identity. Using and further developing vernacular Bhutanese architectural principles has a broad and not yet exhausted potential which should not only result in adopting formal expressions.



Trongsa Dzong



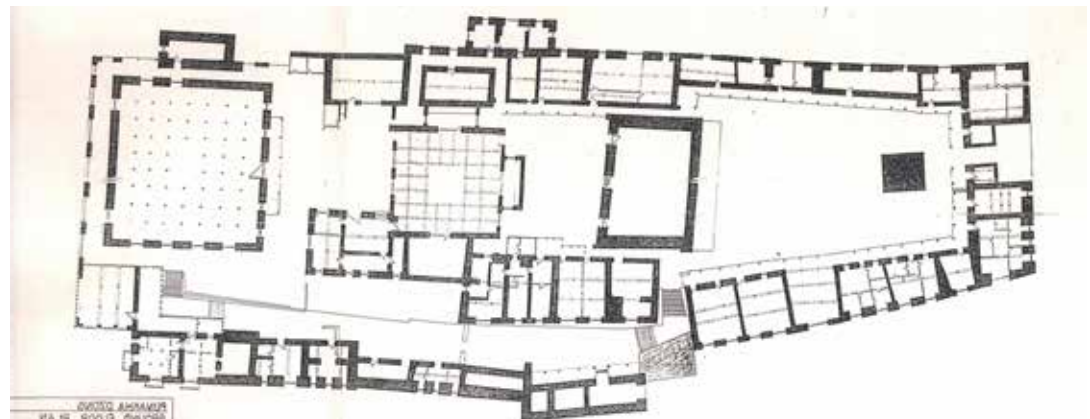
Courtyard in the old Wangduephodrang Dzong



Plans and section of a farmhouse in the Paro valley



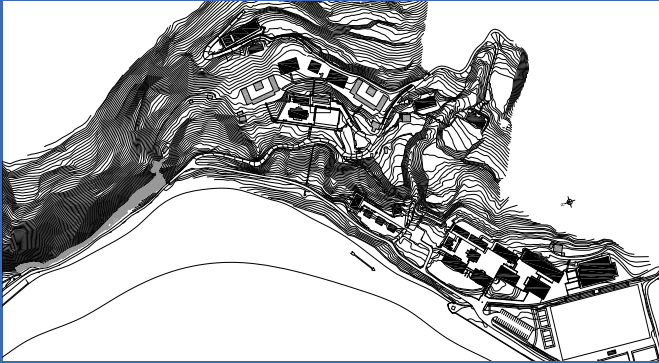
Farmhouses in the local environment



Second floor of Punakha Dzong

PARO COLLEGE OF EDUCATION

PARO 1993 - 2005



Paro valley with the large campus on the hillside above Paro River

Based on a master plan, the Paro College of Education (former Teacher Training College / TTC) was designed and built in different phases using revised planning studies. The core and first phase of the campus included academic and administration buildings arranged around a central courtyard. The expansion of the College continued the pattern along the sloped terrain. The building levels are adjusted to the topography, stepping down to the sports compound to the east. The library and the computer centre are located at the main entrance facing the courtyard. The staff housing to the west and the student hostels to the north, as well as the existing Rinpong site 600 meters to the west of the main compound, complete the complex and its infrastructure.

PARO COLLEGE OF EDUCATION

Object: College of Education, Paro

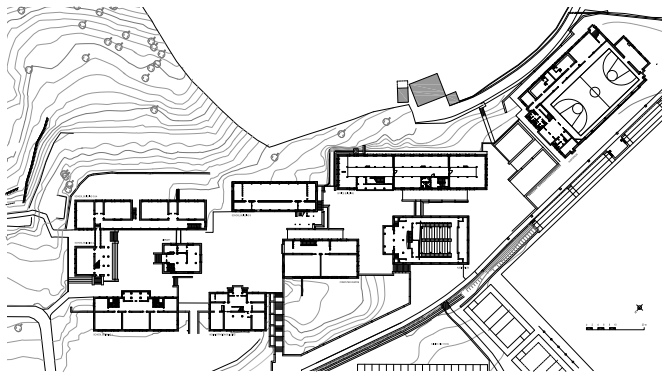
Planning and construction phase: 1993 - 2005

Client and building owner: MoE/RUB/RGoB

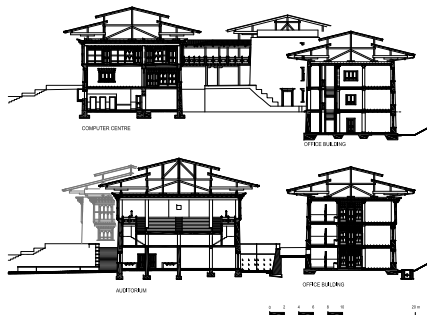
Realization: Helvetas, with a team of Swiss and Bhutanese architects and engineers, Bhutanese contractors, and Bhutanese and Indian technicians and workers



Different views of the College of Education from the riverbank and from inside the courtyards

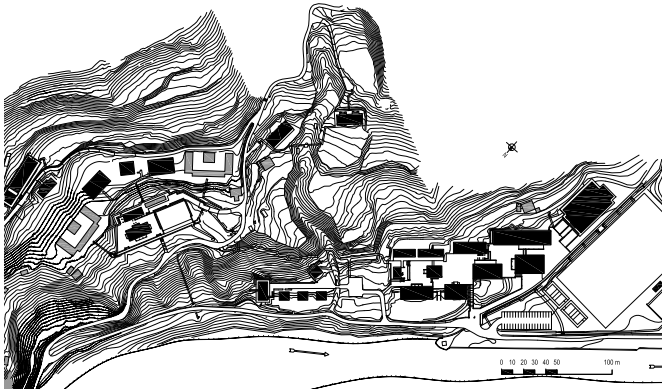


Ground floor plan of the academic buildings



Sections academic buildings



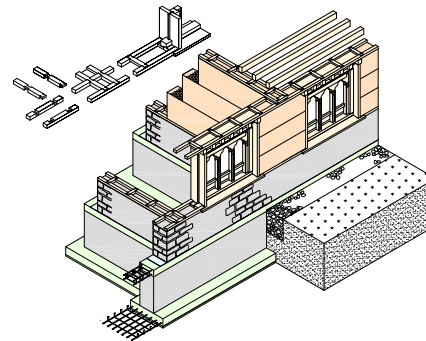


Situation with hostel, residential and academic buildings

As in other projects, traditional architectural elements (a combination of stone and timber construction including the use of concrete for large construction beams), construction details such as Kachen, and other features in painted timber mark the character of the buildings. The adaptation to the topology and the placement of the built volumes create attractive meeting places. These spaces have specific characters, generated by the wooden arcades linking inside and outside, and connecting certain buildings together.



Court yard of academic complex



3-D drawing of the rammed earth construction:

Rammed earth constructions are adequate to support vertical loads but not horizontal movements, which occur during earthquakes. Adding well connected wooden bands, expanded metal sheets or geo textiles improve the lateral stability to a great extent and make traditional structures much more earthquake resilient.



Window inside the rammed earth wall

FOCUS: RAMMED EARTH

Another local building method used in Paro is the rammed earth technique. Due to its excellent properties for the regulation of humidity and heat, rammed earth is an attractive building material. On top of a stone base that protects it from excessive water contact, the massive wall is erected with a combination of pressed clay and earth, reinforced with metal mesh. The use of wooden bands at the window sills and at the lintel level as a base for the joists are also very effective for preventing earthquake damages.



Rammed earth construction with expanded metal sheet



Rammed earth and wooden window frames



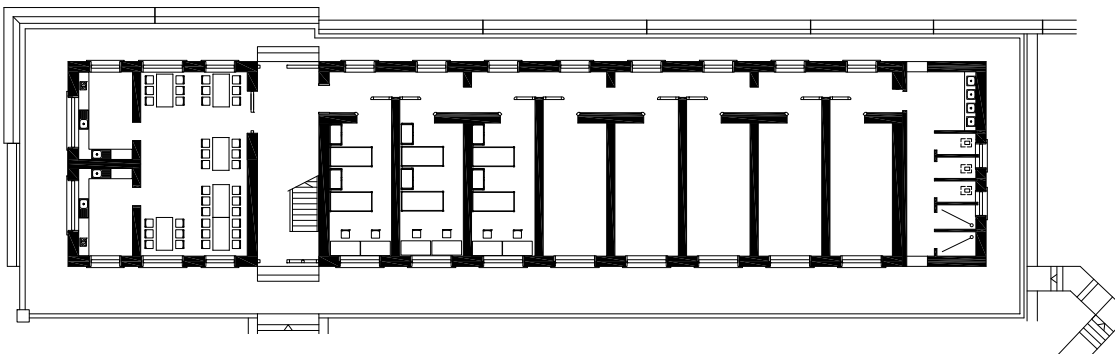
Gymnasium



Library



Arcade in front of the classrooms



Ground floor plan of student hostel



Student hostel

BUILDINGS AND LANDSCAPE

The College site is well integrated into the landscape along the river and up the hillside. The strategic limitation of space and the need to use the valley slopes instead of the fertile flat land necessitated the planning of compact urban structures. The various building ensembles make use of the natural topography and draw from vernacular building settings such as Dzongs and rural farmhouses in a simple and economic way. The abundant vegetation around the buildings is another important element that enhances the character of the campus. The project interacts with all these natural components by benefitting from their advantages for example, from the slope to create dialogues and to separate different parts of the complex. The trees foster a comfortable climate.



Paro valley and Dzong



Section through the landscape from the hill to the river



River and vegetation



Staircase and entrance



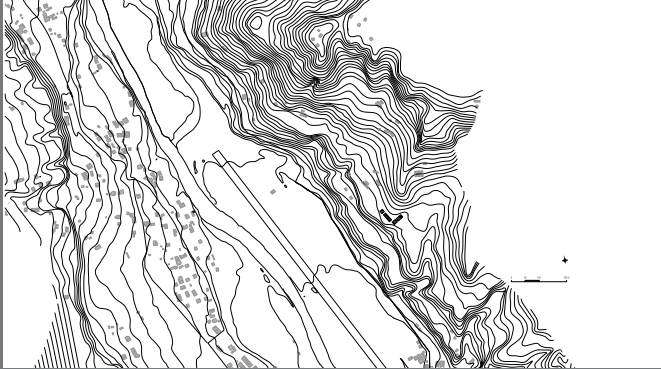
Road and stonewall following the natural topography



Chorten in the gentle modelled landscape

RNR-RESEARCH AND DEVELOPMENT CENTRE

JAKAR 1998 - 2004



Jakar in the Bumthang valley with the RNR Research and Development Centre

One of the main objectives of the Renewable Natural Resource (RNR) - Research and Development Centre (RDC) in Jakar is to develop new technologies to suit the needs of local farming systems. Sitting on a plateau on the hillside of the Bumthang valley, on the east side of the river, the RNR-RDC Jakar campus lies in a natural context. A laboratory garden and a forest form the immediate environment. A large central courtyard is the heart of this complex. The buildings form an L-shape against the valley, opening up on the other side to the courtyard and into the nature. Traditional painted wooden elements dominate the facades and determine the atmosphere of the interior spaces.

RNR - RDC JAKAR

Object: RNR Research and Development Centre, Jakar

Planning and construction phase: 1998 – 2004

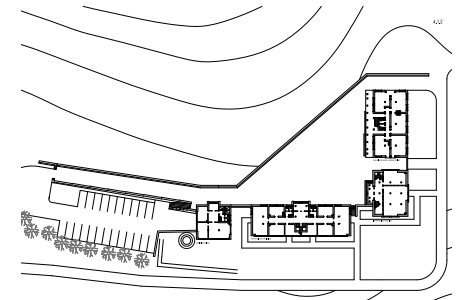
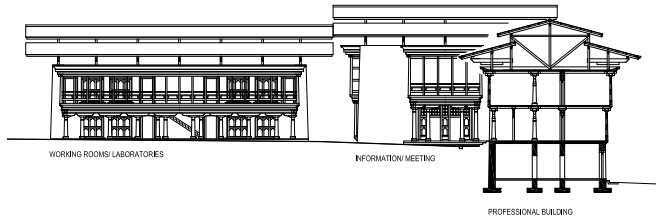
Client and building owner: MoAF/RGoB

Realization: Helvetas, with a team of Swiss and Bhutanese architects and engineers, Bhutanese contractors, and Bhutanese and Indian technicians and workers

Construction costs for office and laboratory buildings, 1998-2004: 742 NU/square feet (plinth area); 28,277 total plinth area in square feet; NU 85/cft timber price/cubic feet (mixed conifer)

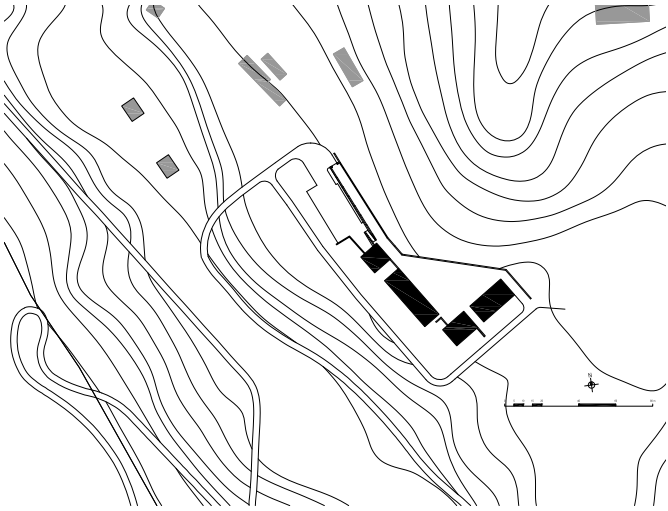


General view of the RNR-RDC buildings surrounded by the laboratory gardens



Working rooms/ Laboratories (left), Information/Meeting rooms (middle), Ground floor plan Professionals Building (right)



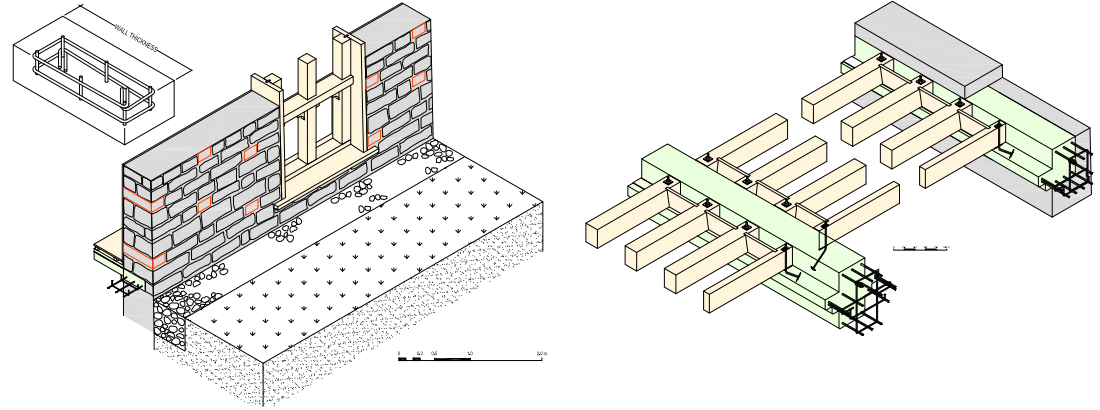


RNR-RDC Centre in the rural context

The four buildings are constructed in stone as a massive groundwork. The windows are reinforced with wooden frames around decorative openings and fitted inside holes in the masonry walls. In addition to the windows, light wooden constructions are used outside or inside the big walls as load-bearing structures to assure a proper functioning of the earthquake resistant elements.

FOCUS: EARTHQUAKE RESISTANCE

In the exhibited projects, earthquake resistant building technology is part of the planning and the construction methods. Buildings of stone masonry walls combined with timber constructions like the RNR-RDC Centre use reinforced concrete features to prevent earthquake damage (see 3-D drawing below). Constructions with rammed earth walls such as the student hostels in Paro or the staff housing in Lobesa use expanded metal sheets inside the rammed earth to balance stability and flexibility. Additional elements include the use of wooden bands at the window sills and at the lintel level as a base for joists to provide an effective connection and good earthquake resistance.



3-D drawing showing stone masonry walls and timber construction using reinforced concrete features to improve earthquake resistance: Separation of the inner and outer leaf of stone walls occurred in most of the recent earthquakes due to missing bond stones. Using reinforced precast concrete blocks as "binder stones" connect the leaves and is verifiable after constructing the wall. Construction reinforced concrete bands and beams and connecting joists by nut/bolts improve the earthquake resilience of stonewall buildings.



Ekra wall and flying roof



Stone masonry wall construction



Stonewall

MATERIAL AND CONSTRUCTION

Vernacular architecture as a model for new buildings plays a very important role in Bhutan. The essence of this vernacular way of building lies in the use of local materials such as stone, mud, wood etc. together with local craftsmanship and technology as the basis for handling these materials. In many contemporary examples, only the typology is emphasized, leaving out the idea of tectonics, material, and craftsmanship. To build cheaper and faster, many of the urban buildings try to imitate an authentic architecture with painted concrete and brick walls. In doing so, not only a lot of important knowledge of traditional crafts and technology is lost, but also a new set of challenges surface chiefly because of inappropriate use of these materials. In all the projects presented in this exhibition, the intention has been to demonstrate an alternative to this way of building through a critical regionalism. The key points are: first, learning from vernacular architecture in space, typology, design, construction, and material; second, using new technologies for new needs in space and comfort; third, interpreting and combining traditional and modern elements for a sustainable architecture.



Development of the windows: vernacular type with shutters, use of insulation glass, and further developments

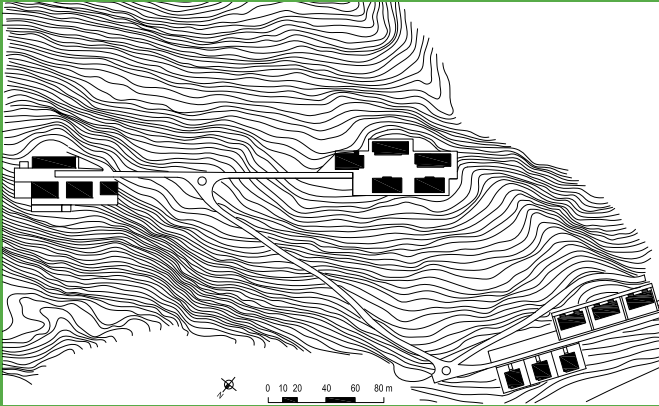


Focus on cheap and fake imitations of traditional construction: painting on concrete construction in Thimphu and wood replacement by using concrete elements in the new Wangdue town

Basic traditional construction methods: timber construction (above), rammed earth wall, and stone construction

RURAL DEVELOPMENT TRAINING CENTRE

ZHEMGANG 2004 - 2007



Training Centre on the hillside of Zhemgang

Situated on the hillside in a rural context, the training centre is subdivided into three parts - the school, hostel and administration buildings with visible stonewalls form a courtyard that functions as a meeting place. Agricultural infrastructure includes the cattle shed and the chicken coop to the west and the housing complex down the hill. All three parts have been built in their own character according to their use. The visible stonewalls combined with the traditional painted wood arcades give a slightly modern appearance to the school buildings, while the agricultural installations are very functional and without decorative elements. The residential buildings are built in a vernacular style.

RDTC ZHEMGANG

Object: Rural Development Training Centre, Zhemgang

Planning and construction phase: 2004 – 2007

Client and building owner: MoAF/RGoB

Realization: Helvetas, with a team of Swiss and Bhutanese architects and engineers, Bhutanese contractors, and Bhutanese and (mostly) Indian technicians and workers



Training Centre and its rural context



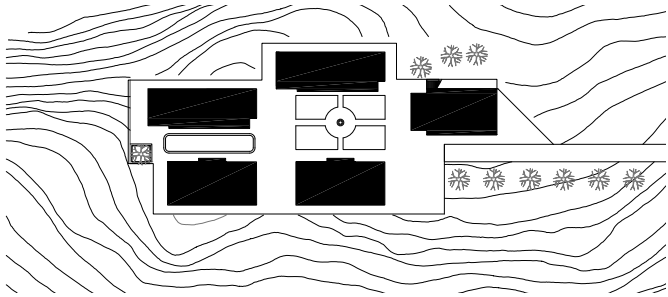
Training Centre



Facade of school building



Classroom



Situation of the Training Centre

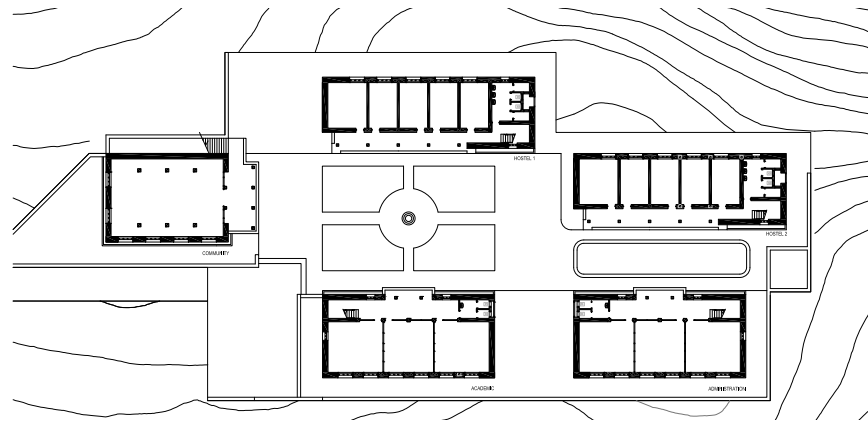
A concrete grid structure inside the training centre already used in other projects featured in the exhibition allows a larger room width. In contrast to the other projects, the columns and beams are left apparent and they structure the space. The construction elements are also left visible on the exterior walls and on the agricultural buildings. The cattle shed especially shows all the connections and materials in their pure functional form, following the idea of constructive truth.

FOCUS: BUILDING TECHNOLOGY

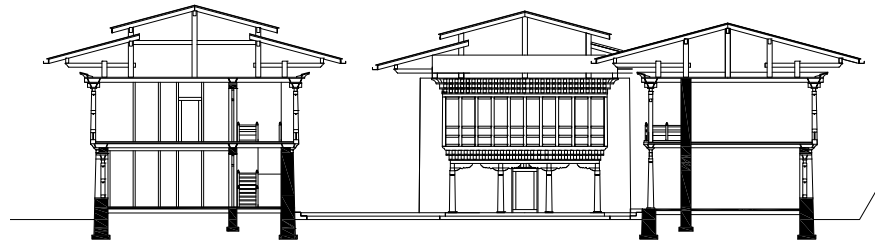
The installation shaft hidden behind a wooden element displays the intention of the project to improve maintenance and raise the aesthetic quality of the building, while at the same time utilizing clever design. The wooden cover becomes an ornamental element on the facade and protects the usually open ventilation system from the weather. Other technical innovations that follow local architectural expression or add a new component to the existing grammar are characteristic of this project. The ventilated roof construction is just one of them.



The buildings in their context with the central courtyard



Ground floor plan



Section Administration (left), Elevation Community (middle), Section Hostel (right)

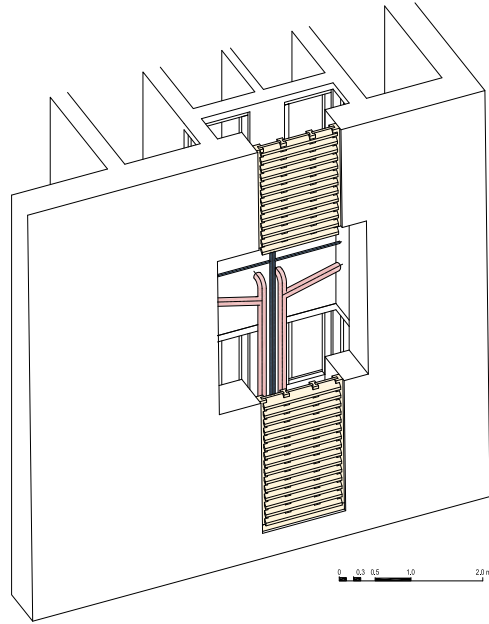


Hidden but accessible installation vs. open ventilation





1. Sanitary



3-D drawing showing the installation shaft: Sanitary installations added to new buildings on the elevations are an eyesore but the pipes could easily be hidden if sanitary shafts are planned at the beginning



3. Heating / cooling



2. Electrical



4. Heating / cooling



Chicken coop



Cattle shed, exterior view



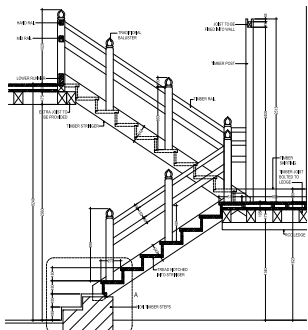
Cattle shed, interior view

QUALITY CONTROL IN DESIGN, PLANNING, AND CONSTRUCTION

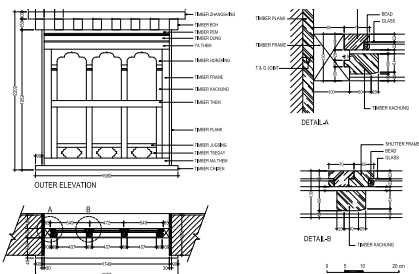
Buildings that are well planned and executed to a high standard guarantee long-term use with less maintenance and provide for future adaption to new needs. However, to achieve this aim several points have to be respected:

1. Clear objectives concerning requirements, standards, etc.;
2. Integral planning process, designing a holistic architectural concept, and implementing the various aspects of architecture, such as local environment and space, as well as social, cultural, technical, constructive, and economic aspects;
3. Execution planning and detailing with a focus on durability, sustainability, and long-term use, and;
4. Execution, site supervision, and quality control for all the aspects combined with a maintenance friendly design and detailing, good guidance on the construction site, and a manual for the future occupants.

Successful projects require well-trained workers and can involve – as in all the Helvetas projects – an element of on-the-job training, e.g. for plumbers, electricians, etc. The process of construction follows the same idea as the architectural language of the building: a combination of cultural heritage (with well-educated craftsmen) and technical improvements in material and construction.



Working drawing of a staircase and a page from a maintenance manual



Example of an executing drawing



Smart yet simple quality providing high-precision execution and planning for less maintenance



Quality detailing in timber construction



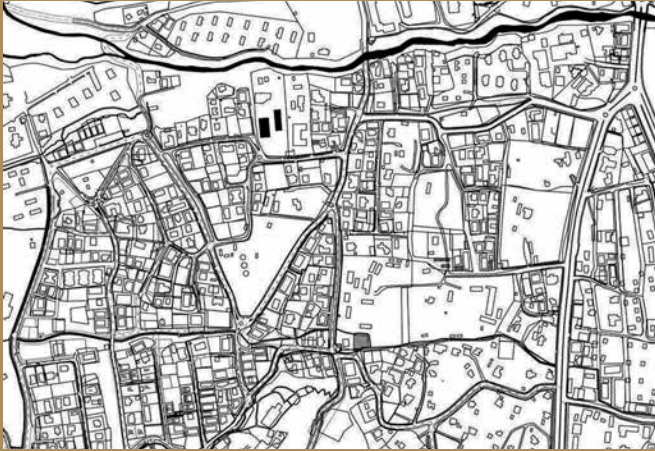
On-the-job training



Drainage detail for easy maintenance

RUB AUDITORIUM AND IT/LIBRARY

THIMPHU 2011 — 2014



Urban context of Thimphu with the RUB auditorium and IT/Library

The project included an auditorium and an IT/Library as part of the Royal University of Bhutan that houses the Vice Chancellor's office in Thimphu. The goal of the project was to promote an optimised utilisation of local resources and to create an attractive and modern learning environment for the University.

RUB AUDITORIUM AND IT/LIBRARY

Object: RUB Auditorium and IT/Library, Thimphu

Planning and construction phase: 2011 - 2014

Client and building owner: RUB/RGoB

Funder: SPET* Germany/RGoB/HELVETAS

Realization: SPET and Helvetas, with a team of German, Swiss and Bhutanese architects and engineers, Bhutanese contractors, and Bhutanese and (mostly) Indian technicians and workers

Construction costs for Auditorium and IT/library building, 2011-2014:

2,540 NU/square feet (plinth area);

21,013 total plinth area in square feet;

NU 350/cft timber price/cubic feet (mixed conifer)

* Society for Promotion of Education and Training



A combination of rammed earth and wood creates the link to traditional building techniques. The conscious exclusion of colour on the timber shows the intention of the project to be an interpretation and not a copy of local architecture. The monumental front facade of the auditorium creates and characterises the main structure.



General view of the RUB complex with the main square and the space between the buildings



Contemporary roof detail solution



Auditorium entrance hall

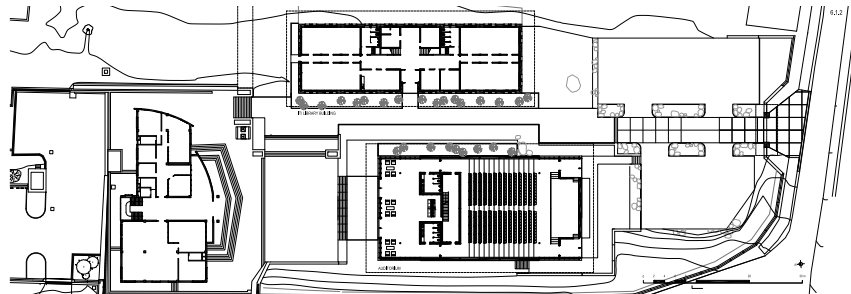
The facade is characterised by the combination of traditional decorative elements and a simple modern language of material use. The windows, as a border between outside and inside, play the role of transmitters as they are the only interior element with a decorative form. The interior space is less about cultural heritage and more about creating attractive and practical spaces. Wooden trusses reinforced with metal bolts and wires allow for the large halls of library and the auditorium.



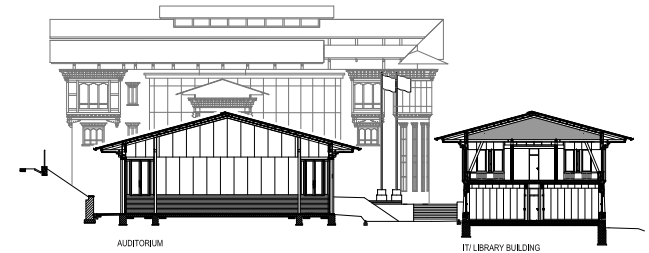
The main entrance to the auditorium and the building in the urban context

FOCUS: ENERGY AND COMFORT

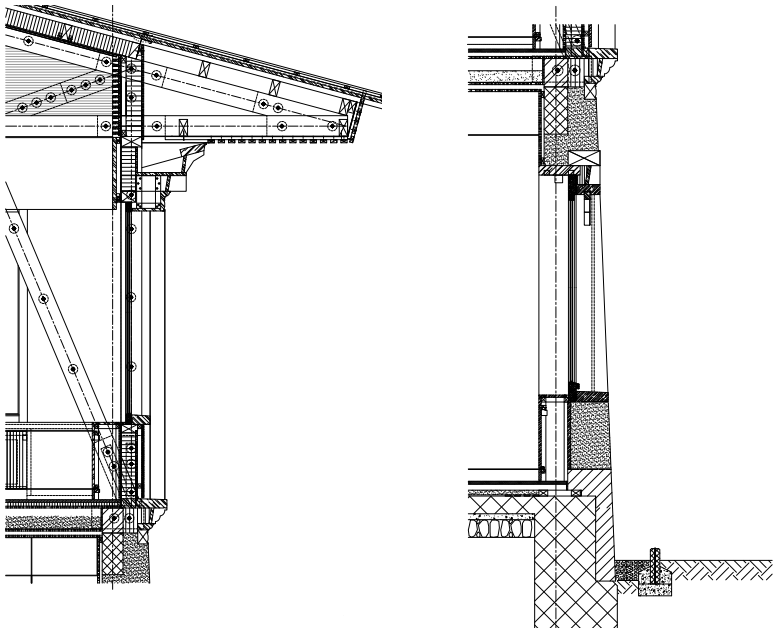
The RUB building is the most "modern" of the six exhibited projects in terms of aesthetics and technical facilities. Thermal insulation and improved windows provide a higher interior comfort. The tighter building envelope necessitates ventilation, heating, and cooling systems to obtain a good room climate. A further development in building technology (although not realized in this project) would be the use of solar panels or photovoltaic elements integrated in the roof of the building to produce the energy required for heating and lighting.



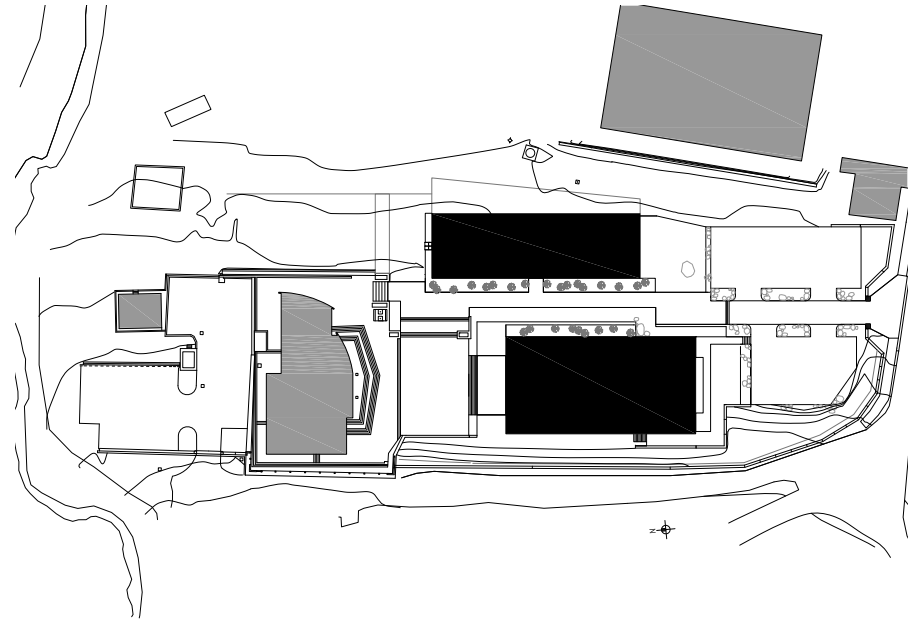
Ground floor plan of auditorium and IT/Library



Section of auditorium (left) and IT/Library (right)



Construction detail of the developed roof with wooden soffit



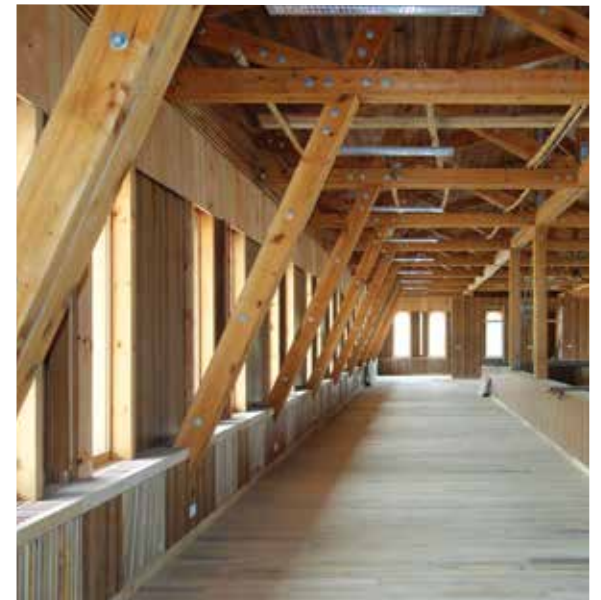
The RUB auditorium and IT/Library



IT room



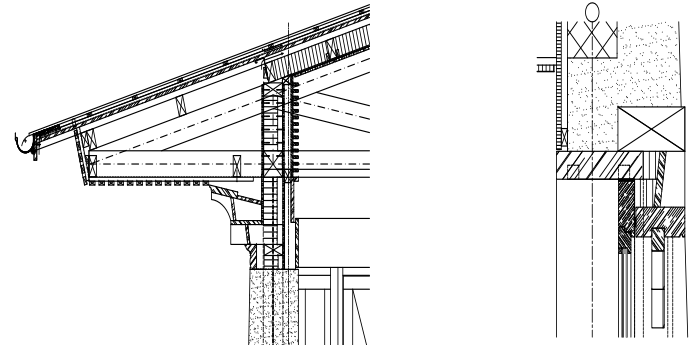
Auditorium



Library hall on the first floor of the IT/Library building

NEW TECHNOLOGY AND DESIGN

All the exhibited projects realized by Helvetas and its partners seek a balance that combines the rich cultural heritage of Bhutan with new and adequate technology and design solutions. In the RUB building in Thimphu, some special technological aspects should be pointed out: a highly thermally insulated building envelope, including the thermal glazing of the windows offers more comfort. A concrete frame with concrete shear walls in the IT ground floor allows for the construction of the library on the first floor, thereby increasing the seismic resistance. Prefabricated timber trusses joined with steel fittings permit the spanning of the wide space. A multilayer wooden floor above the IT ground floor provides better sound insulations.



Detail drawings showing roof, wall, and floor construction with thermal insulation and developed architectural design



Ventilated roof construction with waterproof underlayer preventing moisture to get in contact with the timber trusses below. A roof is a potential surface to integrate solar elements to produce hot water and /or electricity



Roof and wall connection detail and truss construction



Timber construction with thermal insulation and vapor layer on the room side



Wall construction combining concrete shear walls and rammed earth walls

THE EXPERIENCE OF A BEEKEEPER IN BHUTAN

Fritz Maurer

I would like to share with you some of my struggles as a beekeeper, which is not much known. However, let me first say a few words about my early association with honeybees.

I was born and brought up in a country where milk and honey flow freely and was associated with these two highly valued foods from my childhood. I grew up in a cheese factory and later on learnt milk processing as my profession. My father was a beekeeper, managing about 30 colonies at a number of different locations.

I do not know what was more fascinating, the extraction of honey, which usually became some sort of a festival where children from the neighbourhood or relatives would also join in, or the interesting world of the honeybees, to which my father introduced me at an early stage. When I got my first colony, a swarm, I was so excited that I would check the colony whenever I got time regardless of the stings which had to be expected. (My father and I never used any protection gear while handling our bees). From that moment onwards I knew that wherever my future would be honeybees would always play an important part in my life.

Beekeeping in Bhutan - first attempts

When I came to Bhutan in 1969 I was first looking for milk, that was my duty, and then for honey, that was my hobby. I still remember my first impression on honeybees in this country. There were about 20 huge colonies on a single comb, which I saw on an overhanging rock at Tugezampa, 13 km from Wangduephodrang. Later on I found the same type of bees at the Thimphu and Paro Dzong and on many farmhouses and rocks at different places all over the country.

From the literature I knew, this giant honeybee (the biggest known worldwide), also called rock bee or by its scientific name, *Apis dorsata*, was a species known only on the Asian continent. I also learnt that it cannot be domesticated. Yet I tried to make use of such colonies and collected honey and wax several times and at different locations. While doing so, I also had first-hand experiences with the behaviour of this honeybee. Some colonies were rather docile and we

could pass by without being harmed. But there were some nasty surprises with extremely aggressive bees that would follow and attack us over long distances.

I tried to lure them to the old house at Karsumphe by fixing some old combs on various planks under the roof, and inviting the bees to settle there. But this experiment did not work and the nearest colonies preferred to stay on a rock face few hundred meters up the valley. In the following years my work with the rock bee concentrated on wax and honey collection and a survey of colonies in the Bumthang district. There were so many colonies that I explored the possibility of exporting beeswax to Europe. In the mid-80s, however, the rock bee population in the country (also in India) declined rapidly for some unknown reason and in several districts they almost completely disappeared.

The other local bee species found in the country caught my attention in the early 70s. This honeybee, known as *Apis cerana*, is much smaller than the rock bee and can be domesticated. Colonies are successfully kept in log hives as well as in hives with moveable frames. One day I found such empty hives in a storeroom of the Department of Agriculture. It turned out that these materials were the leftovers of an earlier beekeeping project. However, very little information was available on this adventure and nobody was able to tell me why it had failed. Yet the material was handed over to me with the recommendation to put it to good use.

Consequently I went in search of bees. From some earlier visits to places like Darjeeling, Kalimpong, and Kurseong, and my contacts with some Catholic Fathers there, I knew that *Apis cerana* colonies were kept in this region successfully. So one day I went with a colleague and a closed truck to Siliguri and Kurseong. With much difficulty I managed to purchase eight colonies with hives, which were, however, in a dilapidated condition. I shall never forget the incident at Jaigaon checkpost, where one officer followed the rules very strictly and insisted on opening the backdoor of our vehicle (it had no windows). Within seconds the whole area was engulfed in a cloud of angry bees that had escaped from the fragile broken boxes. The inspection was hastily abandoned and in the process I learned a new Hindi phrase, which was shouted at me from a faraway office building: *Jaldi chalo*, meaning, move out fast. That was

easier said than done. My driver had also fled and I did not know how to drive the vehicle. So the only thing I could do was to wait until dark and all the bees came back and settled in their broken homes. I think this was the only time in my life where I caused a traffic jam and that also without police interference. Another result of this incident was the change of my surname from Maurer to *Mauri* (Nepali word for honeybee). This story may stand as a sample for many other attempts to start beekeeping with local bees. It is also meant for my critics who feel that we have not done enough with local bees and brought in foreign species too early.

At one stage, in the early 70s, I nearly succeeded at Gogona with some colonies sent to me by His Late Majesty. Unfortunately it was winter when these bees were collected by a truck of bodyguards from Pedong, Kalimpong (which is another story by itself). On arrival at Tenchholing army camp they were starving (the bees, not the bodyguards). Only a few colonies survived but two settled well at Gogona and produced a good harvest the following season.

However, at one time in my absence, a marden (Achunini) managed to eat a hole into the hives and that was the end of this rather encouraging experiment. Discouraged by so many failures, I used my first home leave (after four years) to arrange a colony of *Apis mellifera* (the native honey bee of Europe) and bring it all the way to Gogona (sounds easy but was an adventure by itself!) My plan was to multiply this colony and later on import some queens to create some sort of basic apiary with those bees I knew so well. Yet, one day this colony was found queenless and that was the end of my first attempt to introduce *Apis mellifera* to Bhutan.

Back to *cerana* – more attempts at beekeeping

In the meantime, we had started the Dairy and Forestry Project at Bumthang and again I concentrated my efforts on hiving and multiplying *Apis cerana*. During my tenure as District Agriculture Officer some of my staff became interested in beekeeping. We brought colonies in log hives from Dalsingpara, Hasimara, and Alipur Duar and also wild colonies from Incholing, Beling, and other places in the Trongsa and Zhemgang districts. We were partly successful and were able to keep colonies in log hives and boxes with moveable frames for quite some time. But here I learnt about the main problem with *Apis cerana*: they were absconding! And that was probably also the reason for the failure of the two earlier beekeeping projects in the country. At the heights of my experiment, I had 13 colonies but one day when I came back from Thimphu, all the boxes were empty! I had to start from square one. And the idea of bringing in *Apis mellifera* again became more and more strong. The chance came in 1986, when after almost one year of intensive negotiations with state authori-

ties in Simla, I was able to purchase three colonies from a state owned apiary at Kangra, Himachal Pradesh, and bring them to Bumthang.

This sounds quite easy but it was a hell of a job considering the long distance, all the administrative hassle, and also the initial refusal of the Indian Airlines to carry my valuable passengers from Delhi to Calcutta. The colonies reached Bumthang in a remarkable good condition with only a few casualties. The bees developed well and for the first time I was able to multiply colonies and also to explore the potential for honey production in Bumthang. At this stage I have to mention that until now all the efforts were done purely on a private basis beside my job as a dairy man and Project Manager. But of course I always had good support from my dedicated staff.

The big leap and some setbacks

The next step was in fact a big leap forward. We were able to get more nucs from a private beekeeper in Delhi who also provided some theoretical training to my first beekeeping staff. This was the time when the Government and Helvetas became interested in the business and a small project of sorts was started. There was one final import of nucs from Delhi and then we were completely independent.

Though beekeeping was now on a firm base it did not take long for the first setbacks to appear. Some brood developed diseases and the first parasites such as *Tropilaelaps clarea* (a mite) and tracheal mites were found. There were also more and more incidents with predators such as bears, hornets, mardens, etc.

At one stage we also realised some possible effects of inbreeding; this was expected since our genetic base was very small. Some fresh blood was required and we got this in form of queens imported from Australia. This was my first and probably the last time travelling with 20 'Ashis' on board from Melbourne to Paro, quite an experience especially while going through the various security checks.

Another important issue cropped up in form of a negative attitude by some villagers. As you all know, beekeeping and honey gathering is considered a sin in Buddhism. I personally feel that this has probably evolved from the fact that traditionally bee colonies were sometimes completely destroyed while collecting honey. Yet religion has to be respected. It took us a lot of effort to explain and demonstrate that beekeeping, the way we practise it, is like milking a cow. We make sure the cow is well fed and looked after properly and that the calf gets its share of milk too. We only take and use the surplus milk for ourselves. It's similar with keeping bees.

One incident which created a lot of goodwill especially among farmers, has to be mentioned here. I don't remember which year it was when a heavy outbreak of the Foot and Mouth disease took place in Bumthang. As far as I remember the vaccine arrived too late and all the cattle in the district were affected except for the farm animals, which were periodically vaccinated. Suddenly farmers turned up demanding honey and to my surprise I learnt that it was a tradition to treat cattle with honey when affected by FMD. It would be interesting to do some research on this.

At this stage I cannot but mention few words on the benefits of honeybees. Usually we think first of honey and if there is plenty of it, honey means money. But it is a proven fact that the value arrived from pollination of crops by bees is many times more than from honey. Wax, which is used for so many purposes, is another valuable by-product. What is probably not so much known is the fact that honey (and Propolis) is a valuable medicine, which has among others good healing effects on wounds. But even that nasty painful sting, which shies away so many potential beekeepers, is considered a valuable medicine, especially against rheumatism.

I hope that in future we can make the best use of all these benefits and I shall definitely do my part of work in my own apiary and share my knowledge and experience with those who are interested. But as you may have realised from my words, a practical beekeeper's research activities are limited and he needs the support of institutions like yours. So I suggest that private beekeepers, Beekeeper's Association of Bhutan and Renewable Natural Resources (RNR) Research work closely together for the future development of beekeeping in the country.

I hope that I was able to give you a glimpse of some of my experiences with honeybees in this country and also further your interest in this fascinating and wonderful insect.

Note:

This is a speech given by Fritz Maurer at an annual general meeting of RNR-RDC Jakar in Bumthang.



THE JOURNEY OF BHUTAN-SWISS FRIENDSHIP

Lyonpo C. Dorji

The story of how relations between Bhutan and Switzerland evolved is a fascinating one. It is about human relationships and how personal ties can bring two nations in two different continents together.

It all started through the personal friendship between Her Majesty the Royal Grand Mother Kesang Choeden Wangchuck and Lisina von Schulthess – daughter of Swiss industrialist Fritz von Schulthess. Her Majesty first met Lisina at school in London, England. Later, while visiting Zurich in 1953, Her Majesty introduced His Majesty the Third Druk Gyalpo to Lisina's parents, Mr. Fritz von Schulthess and Mrs. Monica Schulthess.

His Majesty was impressed by the simple, hardworking and dignified nature of the Swiss people who had turned their small country into an efficient, clean and prosperous nation. His Majesty also appreciated the discipline and dexterity of the Swiss people. He noticed that Switzerland like Bhutan was mountainous surrounded by big neighbours and had preserved its sovereignty and developed good relations with all of them.

The Royal visit to Switzerland marked the beginning of friendship and cooperation between the two countries with many commonalities. The Schulthess family first visited Bhutan in 1955 and thereafter, they visited Bhutan many more times. Mrs. Monica Schulthess was fondly referred to as "Aum Monica".

Mr. Schulthess who was keen to assist Bhutan sent several Swiss experts to share Switzerland's expertise and experience in the field of livestock, agriculture and forestry at his own expense. Later in order to sustain this initiative and enhance cooperation with Bhutan, he established "Foundation Pro Bhutan" in the mid-1960s. The Foundation also assisted the Bumthang Hospital. Most Swiss activities were in Gogona, Bumthang, which was then a very remote place with harsh winters. Today, you can eat Swiss cheese, enjoy the warmth of a *Bukhari* (wood stove) or drink Red Panda beer due to the enterprising Swiss people that helped develop them in Bumthang.

Travelling to Bhutan in the 60s and 70s was not easy with very limited connectivity. When Swiss experts first arrived in Bhutan, the conditions in Thimphu and Bumthang where they were stationed were very difficult due to limited facilities. They faced many challenges, yet they lived and worked in Bhutan, which is a reflection of their dedication and commitment. My good and long standing

Swiss friend and fellow forester Mr. Leo Caminada shared some of his thoughts and impressions of Bhutan. Today, Leo is a grandfather and lives in Greppen, Switzerland, and I quote:

"When I first travelled to Bhutan in 1973, I had to wait in Calcutta for more than a week for my inner line permit. Then I flew to Telepara on a DC3 and went by road with Michael to Phuntsholing. There I stayed with the 'Hing' family. I had received a message from Fritz Maurer that in Phuentsholing a Unimog is waiting...please drive it to Bumthang! The road was in a terrible condition and finally when I reached Thimphu, I met the conservator of Forests Mr. C. Dorji. Then I knew I was in Bhutan. The next adventure began after reaching Bumthang looking for Mr. Roder and Fritz Maurer. Finally, I found Walter Roder in Wangdichoeeling Dzong, where I also stayed. Then the hard times started. I lived on chilly and rice with tea for breakfast, chilly and rice for lunch, and chili and rice with tea for dinner! I eventually got used to chilly and rice. There was no electricity except an open fire stove and candles. We got along well but there were times when we had misunderstandings."

By 1974, with the expansion in the scope of activities, Mr. Schulthess felt that Foundation Pro Bhutan lacked the capacity to effectively coordinate Switzerland's growing engagement in Bhutan. As a result, the coordinating responsibility was handed over to Helvetas, the first international NGO in Bhutan.

Switzerland was one of our first bilateral development partners when Bhutan embarked on the process of modernization in 1961. Today, Switzerland remains a steadfast and important development partner. Cooperation with Switzerland has been meaningful and has had a lasting impact on many Bhutanese, particularly in the rural areas. Helvetas played an important role in coordinating Swiss assistance to Bhutan in the 1970s. It made significant contributions to strengthening Swiss-Bhutan cooperation and making Bhutan's partnership with Switzerland successful. In 1983, a joint Helvetas-SDC office was opened in Thimphu to coordinate Swiss-assisted projects, which existed until 2007. In 2012, SDC established a country programme office in Bhutan headed by a Country Director.

After completing my education in Bhutan and India, I underwent two years of Forest Ranger training in Dehradun, India, after which I was posted to Kalikhola (now Lhamoizingkha), Dagana District, in 1965. Thereafter, I was the first

Bhutanese to complete an MSc in Forestry from the Forest Institute in Dehradun in 1967.

In 1975, I was honoured and privileged to be conferred the Red Scarf by His Majesty the Fourth Druk Gyalpo. In 1976, I became the first Bhutanese to head the Department of Forests and served in this capacity till 1984. Thereafter, I served the Royal Government in various capacities in the Ministries of Trade, Industry and Forests; Agriculture; and Planning Commission. I was appointed as Deputy Planning Minister in 1988, and as Minister and Chairman of the Planning Commission in 1991 by His Majesty the Fourth Druk Gyalpo. In 2000, I was appointed as the first resident Ambassador of Bhutan to Thailand. From 2005 to 2008, I served as the first Bhutanese Secretary General of the South Asian Association for Regional Cooperation. In 2008, I was appointed as Chairman of Privy Council by His Majesty the King and I continue to serve in this capacity today.

Throughout my career with the Royal Government in different capacities, I was closely involved in Bhutan's development activities. Cooperation in the forestry sector is one of the success stories of our partnership with Switzerland. As the first trained Bhutanese forester and first Director of Forests, I was associated with the development of the forestry sector. I worked with so many wonderful and hardworking Swiss people who made a huge contribution to Bhutan. I particularly recall fond and vivid memories of Swiss-Bhutan cooperation since its inception in the 1960s.

My initial contacts with Switzerland began when Prof. Fritz Fischer from ETH Zurich (one of the leading international universities for technology and natural sciences) visited Bhutan in 1969. He was invited by His Majesty the Third Druk Gyalpo to formulate guidelines for the future development of organized forestry, which was then at a rudimentary stage.

In 1970, I visited Norway, Finland, Denmark, Switzerland, and Austria to identify a development partner in the forestry sector. Looking at the geophysical conditions, I found that parts of Norway (west coast), Switzerland, and Austria were similar to Bhutan. However, Switzerland was ideal in terms of size, terrain, landlocked status, and human settlements in the mountains. In 1971, I spent six months at ETH Zurich to study the Swiss forest management system and to learn more about the Silviculture system in the resinous coniferous forests of Switzerland. My experience at ETH Zurich reaffirmed my conviction that the Swiss forest management system would suit Bhutan.

Bhutan-Swiss Friendship, which among others, manifested in cooperation

in the forestry sector must be seen against this backdrop. In this regard, it is pertinent to recall what Prof. Fischer said during his visit to Bhutan in 1969:

“I experienced for the first time in my life a close unity between men, their religious feelings and their environment. Forestry experts who are familiar with problems of mountain forests (it doesn't matter in which mountains of the world) are aware of the danger of a purely economic view of forestry. Sustained human colonization of any mountain region depends largely on local forest conditions. But if it is true that people do not live on bread alone it is also true that they cannot live from forests alone. The meaning of this proverbial saying is simply this: a human society can only survive on a permanent basis in high mountain regions if the use of its resources is balanced and any overuse of any part of the whole is avoided. The human society of Bhutan's high-altitude regions has practiced such an amalgamative existence for centuries. Its equilibrium is quite sensitive based on the experience of a multitude of generations and therefore changes if necessary should be made with utmost caution. The mountain forests of Bhutan are in a much better state than most European alpine forests. However, this favorable state could easily change as can be seen from Nepal's experience.”

The integrated forestry research project of Domkhar and Hurchi (Bumthang District) by Helvetas is a good example of silviculture management whereby we extract timber in such a way that natural regeneration automatically takes place and replanting may not be necessary. This is one of the excellent legacies of Swiss-Bhutan Cooperation.

Going forward, I think there are many areas of collaboration with Switzerland that we could consider. The naturally restocked area often near settlements not only serve the sole purpose of forest tree growing but can also be used for several kinds of farming provided planning is carefully undertaken on a long-term basis. Such products might consist of:

- Fuel wood
- Cattle forage
- Cattle bedding and organic manure
- Cultivation of different species of berried shrubs
- Cultivation of mushrooms (export)
- Cultivation of shrubs for papermaking such as edgeworthia, daphne, indigofera, etc.

Regeneration of Forests: Reintroduce in small patches, species like *Quercus semicarpifolia*, *Q. lantana*, and *Q. griffithii* (besides *Juglans regia* depending on site conditions) at sites where forests vegetation is possible. This may help site conditions and even reduce fire hazards.

There are too many sawmills despite our policy of not exporting timber. The objective of sawmills is to meet the internal requirements (rural and urban). Currently there are 114 sawmills, which is excessive for a small country. This has resulted in the depletion of forests along the roads destroying the water catchment. Construction of highways, district and farm roads, hydropower projects, mining, quarries, and transmission corridors, etc. has caused untold damage to forest ecosystems, and the environment in general. Sawing techniques have yet to explore ways and means to reduce wastage. Concerned agencies should adopt environment friendly construction methods, strengthen environment impact assessment, and ensure rehabilitation of disturbed areas through reforestation and soil conservation.

Skills Development Programme: Occupational skills development in the construction sector is important to generate youth employment. At the same time, there is an acute shortage of skilled people. The construction sector employs huge number of expatriate workers, which needs to be replaced by trained nationals. There is urgent need to train trainers at Vocational Training Institutes and produce well-trained skilled workers. Scarce resources should not be thinly spread but focused on a few priority areas identified by the government such as skills development (training of trainers).

Helvetas was the first international NGO in Bhutan and played a very important role in shaping and strengthening Swiss-Bhutan cooperation. Since 1975, we have worked with Helvetas in many areas such as agriculture, forestry, livestock, education, health, human resources development, local governance, judiciary, and civil society. These are all very critical areas for Bhutan. Our cooperation with Switzerland through Helvetas and SDC has brought about tangible benefits and improved the quality of life of the people of Bhutan.

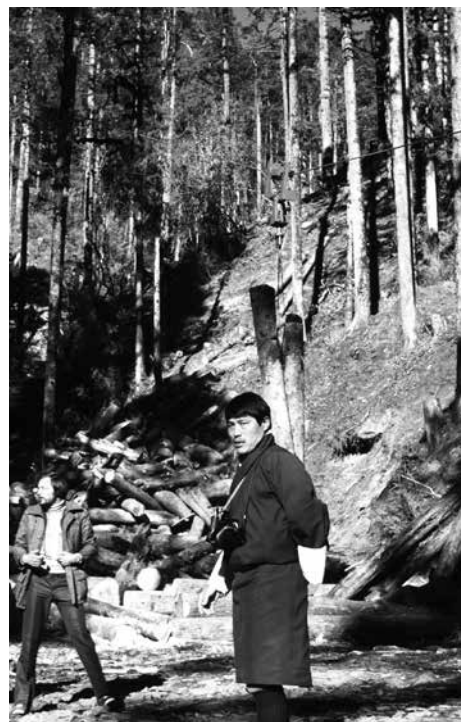
I express my sincere appreciation and deep gratitude to the Schulthess family, Helvetas, and SDC. Mr. Werner Kuelling, former Secretary General of Helvetas, and all the Swiss people who worked and lived in Bhutan often under very exacting circumstances deserve our profound appreciation and gratitude. While it's not possible to name each and every Swiss who worked in Bhutan or officials involved in Swiss-Bhutan cooperation, I remain deeply indebted to all Swiss men and women who contributed to building, nurturing, and deepening this wonderful partnership and journey we shared together.

His Majesty the Third Druk Gyalpo laid the foundations of Swiss-Bhutan relations through his personal friendship and ties with the Schulthess family. This greatly facilitated and engendered greater interaction and cooperation with the government and people of Switzerland. Since then, under the wise and

enlightened leadership of His Majesty the Fourth Druk Gyalpo and His Majesty the King, Swiss-Bhutan cooperation has continued to grow from strength to strength. I have every confidence that our enduring ties of friendship, cooperation, and goodwill with the government and friendly people of Switzerland will be further strengthened in the years ahead.

Tashi Delek!

Chenkyab Dorji
Chairman
Privy Council
Thimphu, Bhutan, 13 August 2015



LEARNING THROUGH STORIES AND SELF-REFLECTION IN GLOBAL COOPERATION

Tashi Choden

A personal perspective.

Bhutan today offers the world an exceptional story. In spite of being locked in a rather precarious position owing to history and prevailing geopolitical conditions, Bhutan has not only maintained but also enhanced its sovereignty, while also making significant gains in socio-economic development.

Since ending its self-imposed isolation to 'open its doors to the outside world' in the mid-twentieth century, Indo-Bhutan friendship has been and continues to be most important in Bhutan's advancement of these national objectives.

At the same time, it is the gradual expansion of meaningful ties and engagement with other countries and organizations, with which it shares similar ideals, that has added greatly to its efforts and success in these areas. Through it all, Bhutan has by and large maintained a good report card in implementing grants and aid received from development partners.

In stark contrast to the struggles and bloodshed associated with instituting democracies elsewhere, Bhutan transitioned to a democratic setup under the meticulous planning and foresight of its fourth King. Another unusual feature of this story is the fact that Gross National Happiness (GNH) is enshrined in the Constitution of Bhutan, making it the collective responsibility of the state and polity to ensure that unbridled economic growth does not compromise the social, ecological and spiritual wellbeing of the country.

In a nutshell, this is a story of Bhutan that provides much food for thought as to what leadership is and can be. It serves to inspire deeper contemplation on the values and principles that leaders and citizenry can choose to employ in matters of national interests, and by extension in matters of international and global cooperation. It highlights the fact that positive societal transformations can be made, if those in a position to do so are daring enough to break with convention in sight of better alternatives ahead.

Of course, like any realistic story, this story of Bhutan is neither perfect nor static. There is obviously much more that has to be done in keeping with the times, to build on past achievements and work on improving the details of this narrative for the present and future.

One way to do this – given our claim that it is our guiding philosophy – is to

get down to the business of putting core values and principles of GNH into coherent plans and actions, taking into account the evolving social, political and economic contexts that we are experiencing.

If we as a society decide to reflect upon ourselves and to consciously plan a well-considered and detailed transformation into a model for the future, we will not only address national concerns and issues, but also strengthen our role as a responsible member of the international community.

In this regard Bhutan stands to benefit greatly, if it can engage meaningfully in a continual process of learning from the inter-disciplinary expertise and cross-sectoral experiences available within the larger global community.

For instance, Scandinavian countries, and even social experiments such as 'the commons movement' in various parts of the world, offer valuable lessons on how others have dealt or are dealing with the creation of communities and institutions based on principles of justice, equity and cooperation – values common to GNH-thinking.

At present, we already see that lessons are being drawn from other societies. For example in 2014, Bhutan's political parties were inspired into setting up the Bhutan Democracy Dialogue (BDD) platform after having engaged in Danish multiparty activities in Denmark. Recognizing the painful divides caused along party lines in families and communities over the last two elections in Bhutan, the five registered parties chose to set up this multiparty platform as a way to encourage political parties to engage in dialogue, build cooperation and partnership across party lines.

As a young democracy working to deepen its democratic perspectives and processes, Bhutan also has much to learn and reflect on from the Swiss system and experience of direct democracy. Besides all the development assistance that Switzerland has been and continues providing Bhutan in its socio-economic sectors, its more recent engagement in various aspects of governance is therefore most timely. In addition, given the similarities in size and geography, other insights of value for Bhutan include how the Swiss have developed a highly advanced and stable economy.

Every interaction, every exchange, presents an opportunity for widening per-

spectives. Therefore, looking ahead in the twenty first century, an important element of Bhutan's international relations and engagement in global cooperation will increasingly be the ability to share the stories that encourage a mutual process of learning and self-reflection to occur among all involved.

Though it may be an idealistic thought, who knows if in the long run such a process could ultimately contribute to greater understanding and respect for all the diversity that exists in this world. As I see it, the whole point of building relations and global cooperation should be about increasing understanding and respect for each other, and not to give in to the dominant scenario of competition for power based on suspicion and fear.

The value in sharing stories is that it allows our humanity to come through, and this, in the end is what is essential for successful global cooperation. Bhutan, for its part, has much to contribute and learn from this process.

A personal perspective contributed
for the '40 years of Helvetas in Bhutan'
commemorative publication.

Tashi Choden

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