

## Résumé

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### Norbu Wangdi

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#### Head

Department of Water Resources and Climate Change  
Ugyen Wangchuck Institute for Conservation and Environment  
Department of Forest and Park Services  
Ministry of Agriculture and Forests  
Royal Government of Bhutan

**Date of Birth:** 05 March 1982

**Sex:** Male

**Nationality:** Bhutanese

#### Education:

- Doctorate in Natural Resources and Life Sciences, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria [2013-2016]
- Associate of *Indira Gandhi National Forest Academy*, Dehradun, Uttarakhand, India [2005-2007]
- Masters of Science in *Instruction and Practical Training in Forestry and Allied subjects* from *Indira Gandhi National Forest Academy*, Dehradun, Uttarakhand, India. [2005-2007]
- BSc. in Life Sciences (Botany, Zoology and Chemistry) from *Sherubtse College*, Kanglung, Bhutan, *affiliated to Delhi University*, India [2002-2004]

#### Current Job Responsibilities:

- Head and Researcher, Department of Water Resources and Climate Change, Ugyen Wangchuck Institute for Conservation and Environment, Royal Government of Bhutan [February 2010 – present]
- Dean of Student and Training Affairs, Ugyen Wangchuck Institute for Conservation and Environment, Royal Government of Bhutan [July 2012– October 2013]
- Faculty, Environment Science Module, Certificate Course in Conservation, Environment and Forestry Studies, Ugyen Wangchuck Institute for Conservation and Environment, Royal Government of Bhutan [February 2010 – 2013]

#### Additional Responsibilities:

- Focal Person for the Global Climate Change Alliance (GCCA)- EU-support to Climate change Adaptation for RNR- sector, Ministry of Agriculture and Forests [February 2013-present]
- Lead Co-ordinator, National, Regional and International Institutional Collaboration and Linkages of the Ugyen Wangchuck Institute for Conservation and Environment [July 2012-2013]
- Head, Training Unit, Ugyen Wangchuck Institute for Conservation and Environment, Royal Government of Bhutan [July 2012-October 2013]
- Member of the *National Water Resource Board of Bhutan* [2011-present]
- Member, Bhutan Water Partnership [2010-present]

#### Professional Experience:

- Principal Investigator, Drought Stress Tolerance and Climate Change Adaptation Potentials of two main forest types in Bhutan [Nov 2013-present]
- Assistant Executive Secretary, Bhutan Climate Summit Secretariat, *Bhutan Climate Summit for a Living Himalayas* [February 2010 – February 2012]
- Project Manager US\$4,30,000: Mac Arthur Foundation Support for Bhutan Climate Summit for a living Himalayas [2010-2011]

- Project Manager, US\$4,30,000:WWF Support to Bhutan Climate Summit for a Living Himalayas.[ 2010-2011]
- Project Manager, US \$ 200,000:UNDP Support to Bhutan Climate Summit for a Living Himalayas.[ 2011-2012]
- Principal Investigator for the Case study on *Loss and Damage due to adverse effects of Climate Change in Bhutan*,commissioned by *United Nations University*,Bonne,Germany[ 2012]
- Member of the Country Delegation for UNFCCC COP-18, Doha , Qatar[ November 2012-December 2013]
- Project Manager and Principal Investigator for the *Ecological Significance of Key High Altitude Wetlands in Bhutan* [2012-2013]
- Principal Investigator and Team Leader, Lunana Expedition-An Investigation of the Glacial Lakes of Bhutan,supported by Bhutan Foundation[June 2010]
- Project Manager and Principal Investigator for the *Inventory of High Altitude Wetlands Project*,Supported by WWF-Bhutan program[ 2009-2010]
- Conservation and Biodiversity Inventory Officer, Department of Forests and Park Services, Royal Government of Bhutan [2008 –2009]
- Program Co-ordinator, Anti-poaching Program, Department of Forests and Park Services, Royal Government of Bhutan[ May 2008-January 2010]
- Program Co-ordinator, Elephant Conservation Program, Department of Forests and Park Services, Royal Government of Bhutan, [May 2008-January 2010]
- Member of Country Delegation for UNFCCC COP-17,Durban, South Africa[ November 2011-December 2011]
- Member Secretary, Bhutan Ecological Society(BEST)[January 2011-Present]

#### Publications:

- Wangdi et al (2016). Soil CO<sub>2</sub> efflux from two mountain forests in the Eastern Himalayas, Bhutan: components and controls. *Biogeosciences Discuss.*, doi:10.5194/bg-2016-291.
- Wangdi, N. (2016). Drought Stress Tolerance and Climate Change Adaptation potentials of main forest types in Bhutan. Doctoral Thesis, University of Natural Resources and Life Sciences, Vienna, Austria.
- Dorji, T., Wangdi, N. and Wangdi, K. (2014).Hotsprings and Mineral Springs of Bhutan. UWICE Press, Bumthang,Bhutan.
- Wangdi et al. 2013 .A Report on Ecological and Socio-cultural significance of High Altitude wetlands- A case study of Nub Tshonapatra, Tshokar-Tshona, Tampe Tsho and Jigme Langtsho in Bhutan.
- Wangdi,N.; Kusters,Koen (2013).*The Costs of Adaptation: Changes in water availability and farmer's responses in Punakha District,Bhutan*.International Journal of Global Warming. Inderscience Publishers Ltd. ( Accepted for publication)
- Wangdi,N. and Kusters,Koen.(2012)*The Costs of Adaptation in Punakha,Bhutan: Loss and damage associated with changing monsoon patterns*. United Nations University,Bonne, Germany
- Field Investigation of Glacial retreat in Lunana Valley,Royal Kingdom of Bhutan, A Research Report, Himalaya,Vol XXXI(1-2)2011
- Wangdi,N.,Sherub., Norbu, Nawang.,and Lhendup,Phurba. 2010. *An Inventory of High Altitude Wetlands in Bhutan*. UWICE Press,2010.
- Wangdi,N. and Wangchuk,Jigme. 2010. Bhutan Water Seminar: Technical Presentations.UWICE Press.2010.
- Wangdi,N. 2006. *Comparative Analysis of Community Forestry Management and Practices in Bhutan and Nepal*.Indira Gandhi National Forest Academy Dehradun, Uttrakhand, India.
- Jhajira Forest Range, Dehradun Divison.2005. *Biometry in Jhajira Forest Range*. Indira Gandhi National Forest Academy,Dehradun, Uttrakhand, India.
- Kanha National Park, Madhya Pradesh, India.2006. *Kanba National Park: Management Plan*. Indira Gandhi National Forest Academy,Dehradun, Uttrakhand, India.
- *Watershed Management Plan for Dehradun*.2007.Indira Gandhi National Forest Academy, Dehradun, Uttrakhand, India.
- Thano Forest Division, Thano, Dehradun, India. 2006. *Working Plan for Thano Forest Division*. Indira Gandhi National Forest Academy,Dehradun, Uttrakhand, India.
- Mitra,A and Wangdi,N. 2003.*Status of Insect Pest in Sherubtse Natural Resource Study Area, Khaling –Kharungla Forest Management Unit*. Sherubtse College, Royal University of Bhutan,Kanglung,Bhutan.

### **Presentations/Guest Lectures:**

- Mandates and Roles of the Ugyen Wangchuck Institute for Conservation and Environment: Bhutan Symposium, Columbia University, New York City, USA (June 11-12,2013)
- Water Resources of Bhutan: Management and Challenges. Bhutan Symposium, Columbia University, New York City, USA (June 11-12,2013)
- 'The Costs of Adaptation in Punakha,Bhutan: Loss and damage associated with changing monsoon patters.' Presentation for the Visitors of the Think Global School,USA.Ugyen Wangchuck Institute for Conservation and Environment.[ Feb 2013]
- The Costs of Adaptation in Punakha,Bhutan: Loss and damage associated with changing monsoon patters. Presentation for the Side Event on Loss and Damage, UNFCCC COP 18.Doha, Qatar[ November 26,2012]
- 'Climate change and Adaptation in Bhutan.'Presentation for the Workshop on Climate Change Adaptation organised by WWF-Bhutan program and SEI-Bangkok.[ February 10,2011]
- 'UWICE- Mandates and Roles in Climate change and Environmental Research.' Presentation for the Bhutan Water Seminar [ January 2011]
- 'Applications for GIS for Environmental Planning.'Presentation for the Training of District Environmental Officers,Bhutan at Ugyen Wangchuck Institute for Conservation and Environment.[ May 3,2010]
- 'Strengthening Antipoaching Program in Bhutan.' Presentation during the 3-day workshop on Protected Area Management in Bhutan.[ April 2009]
- 'Application of GIS and Remote Sensing for Conservation.' Presentation for the Training workshop for Biological Corridors Rapid Biodiversity Assessment. [2009]
- 'Comparative Analysis of Community Forestry Management and Practices in Bhutan and Nepal.' Presentation to the Academic Committee, *Indira Gandhi National Forest Academy*, Dehradun.[ 2007]

### **Awards:**

- TCS-Colombo Plan Scholarship for PG Diploma (Equivalent to MSc.) in Forestry at the Indira Gandhi National Forest Academy, Dehradun,India[ 2005]
- Principal's Medal for Exemplary Leadership, as the Co-ordinator for the Social Service Unit, Sherubtse College, Kanglung,Bhutan[2004]

### **Courses/Workshops/Seminars Attended:**

- Applications of GIS and Remote Sensing for Natural Resource Management, Kuenphen Institute of Technology. Certificate from the *International Centre for Integrated Mountain Development(ICIMOD) and Council For RNR Research of Bhutan(CoRRB)*Ministry of Agriculture and Forest[ March 4-15,2013]
- Journal Article Writing Workshop, *United Nations University, Bonn, Germany*.[ October 28-November 3,2012]
- UNFCCC regional expert meeting on a range of approaches to address loss and damage associated with the adverse effects of climate change, including impacts related to extreme weather events and slow onset events,Bangkok, Thailand [27 to 29 August 2012]
- International Climate and Society Conference,Nazhoben Pelri Complex, Thimphu Bhutan. Organised by *Columbia University*, NYC,USA and Ugyen Wangchuck Institute for Conservation and Environment[ November 11,2011]
- Climate Change Adaptation Workshop, Kathmandu, Nepal. Organised by SEI-Adaptation Forum, Bangkok, Thailand.[February 21-23,2011]
- Climate Change Adaptation Workshop, Thimphu, Bhutan. Organised by WWF-Bhutan program and SEI-Adaptation Forum, Bangkok, Thailand.
- Bhutan Water Seminar, Punakha, Bhutan. Organised by Ugyen Wangchuck Institute for Conservation and Environment and National Environment Commission, Royal Government of Bhutan.[January3-4,2011]
- Training on Payment for Ecosystem Services. Organised by Watershed Management Division, Department of Forests and Park Services,Bhutan.[ December 13-14,2010]
- Asia Pacific Climate Change Adaptation Forum, *UN Convention Centre, Bangkok, Thailand*.[October 21-22,2010]
- Symposium:Benefitting from Earth Observation, Kathmandu, Nepal. Organised by ICIMOD[ October 4-7,2010]
- Wilderness First Aid. Certificate from the Wilderness Medical Associates,USA[ May 21-24,2010]
- International Conference on Wildlife Research Techniques in Rugged Mountainous Asian Landscapes. Ugyen Wangchuck Institute for Conservation and Environment,Bhutan.[ May 13-19,2010]
- Capacity Building Training Workshop on Integrated Water Resources Management in Bhutan. Certificate from *SaciWATERS*,India and *Royal Society for Protection of Nature*, Bhutan.[May 7-9,2010]
- Grant Writing Workshop. Certificate from the Bhutan Foundation[ March 1-3, 2010]

- Internship programme with the Environmental Change and Ecosystem Services(ECES) programme of the *International Centre of Integrated Mountain Development(ICIMOD)*, Kathmandu, Nepal [15<sup>th</sup> May- 15<sup>th</sup> September 2008]
- Train the Trainer Workshop for “Geo-informatics for Mountain Environment Management” organized by Eurasia-Pacific Uninet and ICIMOD, Kathmandu, Nepal [1<sup>st</sup> – 11<sup>th</sup> September2008]
- 10<sup>th</sup> International Symposium on High Mountain Remote Sensing Cartography (HMRSC-X) organized by ICIMOD [8<sup>th</sup> -11<sup>th</sup> September2008]
- Regional consultative workshop on the ‘Assessment of Climate Change Impacts on the Mountain Ecosystem of the Eastern Himalayan Region, ICIMOD, Kathmandu, Nepla’[12<sup>th</sup> -13<sup>th</sup> June2008]
- Training on New Features in Erdas Imagine 9.2 ICIMOD, Kathmandu, Nepal.[ 7<sup>th</sup> – 8<sup>th</sup> July2008]
- Training on Gender Development organized by ICIMOD, Kathmandu, Nepal[ 10<sup>th</sup>-11<sup>th</sup> July 2008]
- Participated in the *Regional Workshop on GLOF and Flash flood Risk Assessment in the Hindu Kush Himalayas, ICIMOD*, Kathmandu, Nepal.[ 30<sup>th</sup>- 1<sup>st</sup> August 2008]
- Regional Workshop on “Curbing Illegal Wildlife Trade” organized by the Anti-poaching Program, Nature Conservation Division, Department of Forests, Thimphu, Bhutan.[17<sup>th</sup> April-18<sup>th</sup> April,2008]
- Training Workshop on “Rapid Biodiversity Assessment and Information System for Conservation in Bhutan” held at College of Natural Resources, organized by Nature Conservation Division, Department of Forests, Thimphu and Thrumshingla National Park, Bumthang.[15<sup>th</sup> February– 19<sup>th</sup> February,2008]
- National Consultative Workshop on Incident Command System(ICS) and Development of a Disaster and Forest Fire Management Strategy for Bhutan, organized by Social Forestry Division, Department of Forest, Thimphu, Bhutan [25<sup>th</sup> -27<sup>th</sup> January 2008]
- Detection of Crime and Investigation Including Forensics, Apprehension of Offenders & Mob Management .Sardar Vallabhai Patel National Police Academy, Hyderabad, India [ 6<sup>th</sup> August-10<sup>th</sup> August,2007]

#### Key Skills:

- Microsoft Office [WORD, EXCEL, POWERPOINT and ACCESS]
- GIS Packages [ ArcMap 9.3]
- Remote Sensing Software; Erdas Imagine 9.2
- Ecological and Statistical Softwares[ SPSS-13, SigmaPlot 13.0]
- Introduction to R-Stats
- Google Earth Applications

#### References:

1. **Chencho Norbu**, Secretary, National Environment Commission, Royal Government of Bhutan, Email: [cn dofps@gmail.com](mailto:cn dofps@gmail.com)
2. **Nawang Norbu( PhD)**, Director, Ugyen Wangchuck Institute for Conservation and Environment, Bumthang,Bhutan. Email: [nnorbu@uwice.gov.bt](mailto:nnorbu@uwice.gov.bt)
3. **Sherub**, Chief, Research and Education, Ugyen Wangchuck Institute for Conservation and Environment, Bumthang,Bhutan. Email: [sherub@uwice.gov.bt](mailto:sherub@uwice.gov.bt)