

**Yale School of Forestry and Environmental Studies**  
**Online course on**  
**Himalayan Diversities: Environments, Livelihoods and Cultures**  
**Course Number: F&ES 738**

**Instructors: Alark Saxena (Lead Instructor), Mark Turin and Kamal Bawa**  
**Teaching Fellow: Anobha Gurung**

**Contact information:**

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**Spring 2015: January 12 to February 21**

**Meeting time: Friday 10 am -11 am**

**Location: Sage 32**

***1. Course Description***

Himalayan diversities course is a six week online course that showcases Himalayan diversities from three broad themes i.e. Environment, Livelihood and Culture. The course is the only course of its kind. It is geared towards students and scholars interested in developing a broad understanding of the Himalayan region covering topics from Eastern, Central and Western Himalayas. Using subject experts in the region, the course provides insights on Biological, Cultural and Livelihood Diversity within Himalayas. It further engages the students to look at different drivers of change in the region and what sustainable future of Himalayas can look like. The course also provides supplementary material for students who are interested in developing a more nuanced understanding of issues in the region and provides direction to develop further expertise. The course will be taught in an interdisciplinary framework using a problem solving approach. By the end of the course, the students will have a well-rounded understanding of the important Himalayan issues, challenges and ways to create long term sustainability. The online course will be taught both online and in person by three Instructors with primary instruction by the instructor in charge.

***2. Aim:***

Through a technologically mediated online class, we will teach and learn about the environments, livelihoods and cultures of the Himalayan region in a truly interdisciplinary manner

***3. Course Format***

This six-week online course in its first iteration is being offered only to graduate students at F&ES for two credits. In particular, it will engage students in the School of Forestry and Environmental Studies. The

course will use an interdisciplinary method where students individually or in teams will work on projects of their choice to look at challenges in the Himalayas and evaluate solutions to such challenges. The coursework, reading assignments, reading response, comments and submissions will all be done on Canvas which is the new online platform for online teaching.

#### **4. Course Requirement**

The coursework will require online viewing of recorded lectures from subject experts, readings of select articles/papers/reports, reading responses and participation in classroom discussions. For completion of the course, students individually or as a group will finish a project in consultation with the Instructor. Students will be graded on their readings responses, comments, participation in discussion and final projects.

1. **Online assignment [Posted to Canvas]:** Each week students will provide reading response to the week's course material. Through reading responses, students need to provide their impression about the readings and the lectures. Students are also expected to comment on their classmates reading response (such an exercise is aimed to increase classroom participation). Reading responses and comments have to be submitted as per the deadline.
  - a. **Reading responses:** Responses are due to be posted on Canvas on Wednesday BEFORE MID-NIGHT (11:59 pm). Reading response should not be more than 250 words. IMPORTANT – instead of a summary of the readings, response should be students reflection associated to the readings and should enrich the discussion. Each response will be graded for 3 points for a total of 18 points (6 weeks).
  - b. **Comments:** Each student is required to comment on at least 1 reading response of their peers. Comments (not more than 250 words) are due on Thursday at 5 pm.
  - c. **For example** – Reading response for Week 1 (Scale and Scope of Himalayas) is due on Wednesday 14<sup>th</sup> at 11:59 pm and Comments are due on Thursday 15<sup>th</sup> at 5pm.
2. **Group Discussion:** Each week students will gather for one hour of discussion in the presence of the lead instructor. The topic of discussion will be based on the lectures, reading response and comments by students. Students are encouraged to actively participate in the discussion sessions. Discussion will happen in Sage 32 on **Friday from 10:00-11:00 am.**
3. **Final Projects:** A final project needs to be finished for the completion of the course. The project can take different forms (article/ case study/ presentation etc.) in consultation with the Instructor. The project can be taken either individually or as a group. Such projects are envisioned to contribute further to the course content of future classes.

## 5. Course Grading

Grades will be determined on the basis of the completion and quality of course assignments. The course assignments are:

- a) Reading Response and Comments on course material (25% of course grade)
- b) Attendance in Discussion (15%)
- c) Participation in Group Discussion (25%)
- d) Final project (35%)

## 6. Class Schedule

<b>Week</b>	<b>Topic</b>	<b>Reading Response Wed (11:59 pm)</b>	<b>Comments- Thur (5:00 pm)</b>	<b>Final project Thur (5:00 pm)</b>	<b>Discussions – Fri (10-11 am)</b>
Week 1	Welcome + Scale and Scope of Himalayan Chain	Jan 14 <sup>th</sup>	Jan 15 <sup>th</sup>	-/-	Jan 16 <sup>th</sup>
Week 2	Cultural Diversity	Jan 21 <sup>st</sup>	Jan 22 <sup>nd</sup>	Title and brief description	Jan 23 <sup>rd</sup>
Week 3	Biological Diversity	Jan 28 <sup>th</sup>	Jan 29 <sup>th</sup>	Project outline ( max 2 page)	Jan 30 <sup>th</sup>
Week 4	Landscape and Livelihoods	Feb 4 <sup>th</sup>	Feb 5 <sup>th</sup>	Stage 1 – as per discussion	Feb 6 <sup>th</sup>
Week 5	Change	Feb 11 <sup>th</sup>	Feb 12 <sup>th</sup>	Stage 2- as per discussion	Feb 13 <sup>th</sup>
Week 6	Sustainable Futures	Feb 18 <sup>th</sup>	Feb 19 <sup>th</sup>	Final Project delivery	Feb 20 <sup>th</sup>

## Course Modules

(Course material subject to change)

### Week 1- Course Welcome

Section	Video Lead	Other Audio / Video	Readings	Notes
<b>0.1 Welcome videos</b>			no readings required	
Introduction and Welcome	<b>Mark Turin – Course Introduction (9:00)</b>			
Himalaya and YHI	<b>Peter Crane – Importance of the Region and YHI (3:46)</b>			
Meet the Instructors	<b>Kamal Bawa- Intro (2:53), Mark - Intro (5:17), Alark – 12/4</b>			
Course Materials and Open Access	<b>Mark – Digital Himalaya Project and YHI (6:13)</b>			

### Week 1- Scale & Scope of the Himalayan Chain

Section	Video Lead	Other Audio / Video	Readings	Notes
<b>1.1 Defining the Region</b>				
–Borders, Scope & Maps	<b>Mark Turin– Intro to Scale and Scope of the Himalayan Chain (7:02)</b>	<b>WWF Living Himalayas Initiative (0:30) National Geographic Live! – The Call of Everest (31:38) The Himalayas: History of this Beautiful Mountain Range (2:56)</b>	<u>Required Readings</u> “Himalayas” “Why the Hindu Kush Himalaya Matters” “Part I: Setting the Stage” “Part III: Challenges and Opportunities for Sustainable Mountain Development” <u>Additional Readings</u> “The Word Himalaya” “The Environs and Native Names of Mount Everest” “Himalayas: Two Continents Collide” “Mount Everest” “Climbing Mount Everest: Postcolonialism in the Culture of Ascent”	

			<p><b>“Mount Everest: Named after the First Surveyor General of India”</b></p>	
<b>1.2 Geology</b>				
–Geologic history, mountain chain	<p><b>Reinmar – Geology of the Himalayan Chain Part 1 (17:39)</b>  <b>Reinmar – Geology of the Himalayan Chain Part 2 (10:03)</b></p>	<p><b>Animation of Himalayan collision (00:12)</b>  <b>National Geographic: Himalayan Mountains (47:18)</b>  <b>Himalayas: Water Towers of Asia (4:02)</b>  <b>70 Million Years in 2 Minutes (2:27)</b></p>	<p><u>Required Readings</u>  <b>“Himalayas: Geologic History”</b>  <b>“Part Two: The Natural Environment” (in <i>Illustrated Atlas</i>)</b>  <u>Additional Resources</u>  <b>“Animation of the Himalayas Forming”</b>  <b>“Map of the Northward Drift of India”</b></p>	
<b>1.3 Environmental History</b>				
–Climate, Ecoregions & Life Zones	<p><b>Kamal – Environmental History (14:08)</b></p>	<p><b>Secret Towers of the Himalayas (44:51)</b></p>	<p><u>Required Readings</u>  <b>“Part One: The Regional Setting” (in <i>Illustrated Atlas</i>)</b>  <b>“Severe Impact of the Climate Change in the Himalayas”</b>  <b>“An Ethno-Archeological Investigation into Irrigation Agriculture and Water Systems in Mid-Western Nepal”</b>  <b>“Pursuing Environmental History on India’s Himalayas: Challenges and Rewards”</b></p>	

## Week 2- Cultural Diversity

Section	Video Lead	Other Audio / Video	Potential Readings	Notes
<b>2.1 Culture</b>				
-Caste, Class & Ethnicity	Sara – Caste, Class & Ethnicity (20:16)	Born Polluted (27:19)	<p>“Perspectives on Social Inclusion and Exclusion in Nepal”</p> <p>“Reframing Ethnicity: Academic Tropes, Recognition beyond Politics, and Ritualized Action”</p> <p>“Culture and the Politics of Caste in the Himalayan Kingdom”</p> <p><u>Additional Readings</u></p> <p>“Unequal Citizens: Gender, Caste and Ethnic Exclusion in Nepal”</p> <p>“Ethnicity and Nationalism in the Nepali Context”</p>	<p>Read chs. by Holmberg and Tamang</p> <p>Read Executive Summary</p>
<b>2.2 Language</b>				
-Linguistic Diversity & Endangerment	Mark – Linguistic Diversity (17:36)		<p><u>Required Readings</u></p> <p>“Linguistic Diversity and the Preservation of Endangered Languages”</p> <p>“Educating Tibetans in Tibetan?”</p> <p><u>Additional Readings</u></p> <p>“Of Nation and State: Language, School, and the Reproduction of Disparity”</p> <p>“As Forests Are Cleared and Species Vanish, There’s One Other Loss: A World of Languages”</p>	<p>Read Summary, Part 1 and Part 3</p>
-Oral & Written Traditions	Mark - Vanishing Voices (6:33)	BBC Radio series: Our Language in Your Hands	<p><u>Required Readings</u></p> <p>“Voices of Vanishing Worlds”</p> <p>“Oral Stories and Culture Areas”</p> <p>“‘Producing’ Thangmi Ritual Text”</p> <p><u>Additional Readings</u></p> <p>“A Quarrel in the Language Family”</p>	
<b>2.3 Religion</b>				

-Intro to beliefs & practices of region	Andy – Intro to Beliefs & Practices of the Region (16:45)	Andy – Religious Studies in Tibet & Nepal (10:46)	<u>Required Readings</u> “Himalayan Religions in Comparative Perspective” <u>Additional Readings</u> “Inception Workshop Report: Kailash Sacred Landscape Conservation” “Kailash Sacred Landscape Conservation and Development Initiative”	
-Religious Art & Culture		Andy – The Thangka Collection (20:43)	<u>Required Readings</u> “The Cultural Roots of Early Central Tibetan Painting”	
-Traditional Medicines	Sienna – Tibetan Medicine (9:09)	Connecting Modern Medicine to Traditional Healing (11:41) Himalayan Tibetan Medicine School (3:03)		

DUE – Final Project title and brief description (not more than 1 page)

### Week 3- Biological Diversity

Section	Video Lead	Other Audio / Video	Potential Readings	Notes
<b>3.1 Biodiversity</b>				
-Genes, Species, Ecosystems	Kamal – Himalayan Biodiversity (12:34)	Kamal – Biodiversity & Community (36:28)	<u>Required Readings</u> “IPCC Technical Report: Climate Change and Biodiversity” “Biodiversity in the Himalayas” “The Status and Distribution of Freshwater Biodiversity” <u>Additional Readings</u> “The Himalayas Amazing Biodiversity” “New Species Discoveries, The Eastern Himalayas”	Read chs. 1 & 7
<b>3.2 Ecosystem Services</b>				

-Types, Value, and Trends	Peter – Ecosystem Services (5:42)	S.P. & Jagannath – Ecology & Ecosystems (6:01)  California Academy of Sciences on Ecosystem Services (9:03)	<u>Required Readings</u> <b>“Part Four: Resources and Conservation” (in <i>Illustrated Atlas</i>)</b> <b>“Framework for Valuing Ecosystem Services”</b> <b>“Widespread Climate Change in the Himalayas”</b> <u>Additional Readings</u> <b>“Payment for Ecosystem Services Schemes for Conserving Sardu Watershed”</b> <b>“Payments for Ecosystem Services Schemes: Project-Level Insights”</b>	Read Introduction & Conclusion
<b>3.3 Drivers of Changes in biodiversity and Ecosystem Services</b>				
Threats & Management of Diversity	Kamal - Drivers of Change in Biodiversity & Ecosystems (17:22)		<u>Required Readings</u> <b>“Climate Change Impact and Vulnerability”</b> <b>“Enhancing the Ecosystem Services of the Hindu Kush”</b> <u>Additional Readings</u> <b>“Impact of Environmental Changes on Biodiversity”</b>	Read chs. 1 & 4
-Medicinal Plants	Jan Salick – Medicinal Plants in the Himalayas (11:01)	Medicinal Plants of India (22:04)  International Biodiversity Day CEE Himalayan Celebration (5:05)	<u>Required Readings</u> <b>“Health Impacts of Traditional Medicines and Bio-prospecting”</b> <b>“Medicinal Plants of North-Western Himalayas”</b> <b>“IASTAM Conference: Beyond Integration”</b>	
<b>Tie together: Diversity</b>	Kamal and Mark (10:48)	Rajesh – The Himalaya and YHI (5:20)		

DUE – Final Project Outline (not more than 2 pages)



## Week 4- Landscapes & Livelihoods

Section	Video Lead	Other Audio / Video	Potential Readings	Notes
<b>4.1 Land and Agriculture</b>				
-Agricultural Systems	<b>Kamal – Agriculture in the Himalaya (12:11)</b>		<p><u>Required Readings</u>  “Patterns and Ecological Implications of Agricultural Land-Use Changes”  “Land Use Changes in Himalaya and Their Impacts”  “Forest Resource Use Patterns”  “Dynamics of Plant Bioresources in Western Himalaya”  “Development Discourses on the Tibetan Plateau”  <u>Additional Readings</u>  “Part Three: Society” (in <i>Illustrated Atlas</i>)  “Effects of Altitude on Crop Farming”  “Contribution of Infrastructure to Agricultural Growth in Nepal”  “Land Cover Change in Himalaya”  “Types of land degradation in Bhutan”  “Change in the Land Use System in Bhutan”</p>	
-Pastoralism & Transhumance	<b>Tenzing - Pastoralism in the Himalayas (8:11)</b>	<b>Uttam Shrestha - Caterpillar Fungus (16:00)</b>		
<b>4.2 Changes in Land &amp; Livelihoods</b>				
-Changes to Land Use, Tourism, Protected Areas & Migration	<b>Kamal - Lands &amp; Livelihoods in Transition (15:47)</b>	<b>Alark – Tourism in the Sagarmatha National Park (7:13)</b> <b>Great Himalayan National Park (7:38)</b>	<p><u>Required Readings</u>  “Disappearing Sheep: The Unexpected Consequences”  “Land, Livelihood and Rana Tharu Identity”  “Natural and Socio-economic Factors Affecting Food Security”</p>	

			<u>Additional Readings</u> “Himalayan Journal of Science, Vol. 6, Issue 8” “A Marshland Culture” “Poverty, Biodiversity and Institutions in Forest-Agriculture Ecotones”	
<b>4.3 Territory, Identity, Migration, and Borders</b>				
–Traditional Homelands, Migration	Sara – Traditional Homelands, Identity & Mobility (11:39)	Geoff Childs - Mobile Identities (23:33) Sara – Mobility in the Himalaya (6:43)	<u>Required Readings</u> “Tibetan Plateau Grassland Protection” “Socio-Ecological and Religious Perspective of Agrobiodiversity Conservation” “Trading Places: New Economic Geographies” “Are the Central Himalayas in Zomia” <u>Additional Readings</u> “The Movement of Women: Migration, Trafficking, and Prostitution” “Special Double Issue: Nepalese Migrations”	Rd. Introduction, Summary & Recommendations
<b>Tie together: Lands &amp; Livelihoods</b>	Kamal and Alark – 1/16			

DUE – Final Project Stage 1 – As per the discussion with the instructor

### Week 5- Change

Section	Video Lead	Other Audio / Video	Potential Readings	Notes
<b>5.1 Environmental and Climate Change</b>				
–Causes & Effects	Kamal – Environmental Change (15:52)  Jan Salick – Himalayan Climate Change (15:59)	Anobha – Air Pollution in Kathmandu (9:06) The Sacred Himalayan Landscape (25:21) Urban Air Pollution in Indian Cities (5:47)	<u>Required Readings</u> “Has Air Pollution Made Kathmandu Unliveable?” “India Admits Delhi Matches Beijing for Air Pollution Threatening Public Health” “Deteriorating Air Quality”	

			<u>Additional Readings</u> <b>“Deteriorating Air Quality in Kathmandu Valley”</b>	
-Glaciers, Climate Change, & GLOFS		<b>Impact of Climate Change on Himalayan Glaciers and Glacial Lakes (7:15)</b> <b>Himalayan Meltdown (13:04)</b> <b>Kunda Dixit - Environment and Climate Change in Nepal (8:38)</b> <b>Climate Change: Bhutan (3:54)</b> <b>Changing Climate, Changing Lives (3:26)</b> <b>India &amp; Climate Change (16:28)</b>	<u>Required Readings</u> <b>“Measuring Glacier Change in the Himalayas”</b> <b>“High Mountain Glaciers and Climate Change”</b> <b>“Glacial Lakes and GLOFS in Nepal”</b> <b>“Field Investigation of Glacial Retreat”</b> <b>“Glacier Lakes: Growing Danger”</b>	Rd. Summary  Rd. Sections I & III
<b>5.2 Social Change</b>				
-Poverty Indicators: Health, Education, Access conflict resolution, Himalayan Democracy	<b>Mark - Poverty Indicators &amp; Social Change (9:37)</b>	<b>Kunda Dixit - Reporting on Conflict in Nepal (16:43)</b> <b>Hope Cooke – Sikkim (6:45)</b> <b>CK Lai – Journalism in Nepal (28:16)</b> <b>Bhutan: A Kingdom of Happiness Trailer (6:47)</b>	<u>Required Readings</u> <b>“Part Three: Society,” (in <i>Illustrated Atlas</i>)</b> <b>“Unequal Citizens: Gender, Caste and Ethnic Exclusion”</b> <b>“The Rise of the South”</b> <u>Additional Readings</u> <b>“Democracy in Nepal”</b> <b>“The 2013 Elections in Nepal”</b> <b>“Nepal: Social Media for Change”</b>	Rd. Executive Summary and Chs. I & VII
<b>5.3 Urbanization</b>				
-Population Growth, rural-urban migration	<b>Karen Seto – Urbanization in the Himalayas (6:16)</b>	<b>Karen – Urbanization in Asia (18:03)</b> <b>Karen – Cities Changing their Environment (5:00)</b> <b>India’s Urbanization Challenge (4:36)</b>	<u>Required Readings</u> <b>“Population and Sustainability Issues in Mountains”</b> <b>“Hillslope-Channel Coupling in the Nepal Himalayas and Threat to Man-Made Structures”</b> <b>“Environment and Development in Sikkim”</b>	Rd. Introduction & Results/Discussion

			<p>“Rapid Urbanization in Nepal”</p> <p>“Bhutan Balances Urbanization with Pursuit of Happiness”</p> <p><u>Additional Readings</u></p> <p>“Impact of Urbanization on the Hydrology of Ganga Basin”</p>	
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DUE – Final Project Stage 2 – As per the discussion with the instructor

### Week 6- Sustainable Futures

Section	Video Lead	Other Audio / Video	Potential Readings	Notes
<b>6.1 Knowledge Systems</b>				
-Traditional & Contemporary	Reinmar – Knowledge Systems: Scientific & Traditional (11:54)			
-Technology: Education, Communication, Dialogue	Mark - Technology, Education, & Communication (7:08)	Kunda Dixit - Social Media, Technology, & Journalism (8:38) Communicating Climate Change in Nepal (7:33)	<p><u>Required Readings</u></p> <p>“Conservation and Restoration of Alpine Ecosystems in the Upper Barun Valley”</p> <p>“Integrating Traditional Ecological Knowledge and Ecological Science: A Question of Scale”</p> <p>“Traditional ecological knowledge and community-based natural resource management in northeast India”</p>	
<b>6.2 Governance, institutions, &amp; policies</b>				
	Reinmar – Policies, Governance, & Institutions (15:02)	Francoise - Cultural Diversity (14:25) Bhutan’s Former Prime Minister RIO+20 address (9:20)	<p><u>Required Readings</u></p> <p>“South Asian Association for Regional Cooperation”</p> <p>“The Buddhist Truth of</p>	

		Climate Change Communication – Why Isn't the Message Getting Through (5:23)	Happiness” “Population and Governance” “Political economy of climate change governance” “Explaining success on the commons”	
<b>6.3 Dialogue &amp; Participation</b>				
- EIA, Community Forestry, Dam protests, conflict resolution, grassroots responses,	Kamal – 1/16	Lifelines (15:59) Vandana Shiva: Traditional knowledge, Biodiversity and Sustainable Living (16:40)	Required Readings “About: The Story behind the Video” Forests Asia Summit 2014 Participatory Constitution Building in Nepal	
–WWF, ATREE, ICIMOD, ANSAB etc.	Kamal – 1/16 Mark - ICIMOD & ANSAB (5:52)	Living Himalayas (2:26) Better Livelihoods with Indigenous Honeybees (8:57) WWF Heroes for a living planet – Tigers (4:49) Hearts in the Himalayas (21:55)	Optional Readings “Annual Report, 2012” “Integration, Innovation, Impact” Ashoka Trust for Research in Ecology and the Environment Asia Network for Sustainable Agriculture and Bioresources	
<b>Tie together: Looking forward</b>	Kamal and Alark – 1/16			

DUE – Final Project delivered.

## Additional Geographic Focus:

### GF1. Bhutan

Section	Video Lead	Other Audio / Video	Potential Readings	Notes
Introduction	Francoise – Intro to Bhutan (4:57)	Bhutan: The happiest place on Earth (5:40)  Bhutan: Shangri-La (7:45)		
Videos	Francoise – Biodiversity (12:42), Cultural Diversity (14:25), and Challenges/Opportunities (6:12)	Bhutan: The Kingdom where Gross National Product is measured in Happiness (16:31)		

### GF2. Sikkim

Section	Video Lead	Other Audio / Video	Potential Readings	Notes
Linguistic Survey of Sikkim	Enduring Mother Tongues: Language & Belonging in the State of Sikkim (24:43) Hope Cooke on Social Change in Sikkim (6:45)	Sikkim- one of the nicest little secrets of India (7:08)  Yumthang Valley - North Sikkim (4:39)  Sikkim Himalayan Trek - November 2007 (12:52)  Miss Masala: Culinary and Culture of Sikkim (19:24)	Required readings: -Das, Suchismita. 2014. Sikkim the place and Sikkim the documentary: Reading Political history through the life and After-Life of a visual representation in <i>Himalaya, the Journal of the Association for Nepal and Himalayan Studies</i> : Vol. 33:1, Article 9	

### GF3. Nepal

Section	Video Lead	Other Audio/Video	Potential Readings	Notes
		Nepal Tourism Naturally (14:23) Vanishing Culture of Surel Indigenous Community in Nepal (12:00) Nepal – Himalaya – Kathmandu (3:26)		

**Free Online Resources:**

ATREE (research, publications, certificate course?) <<http://www.atree.org>>

Digital Himalaya (journals, maps, census data) <<http://www.digitalhimalaya.com>>

Himalaya journal <<http://digitalcommons.macalester.edu/himalaya/>>

Himalaya: Mountains of Life <<http://www.himalayabook.com>>

ICIMOD (information resources, maps, GIS) <<http://www.icimod.org>>

India Biodiversity Portal <<http://indiabiodiversity.org>>

Nepal Journals Online <<http://www.nepjol.info>>

Tibetan and Himalayan Library <<http://www.thlib.org>>