THE SCHOOL FOR FIELD STUDIES

Human Dimensions of Endangered Species
SFS 3072

Syllabus

The School for Field Studies (SFS)
Center for Wildlife Studies and Human Dimensions of Conservation (CWSHDC)
Kimana, Kenya

4 credits

This syllabus may develop or change over time based on local conditions, learning opportunities, and faculty expertise. Course content may vary from semester to semester.

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COURSE CONTENT SUBJECT TO CHANGE

Please note that this is a copy of a recent syllabus. A final syllabus will be provided to students on the first day of academic programming.

SFS programs are different from other travel or study abroad programs. Each iteration of a program is unique and often cannot be implemented exactly as planned for a variety of reasons. There are factors which, although monitored closely, are beyond our control. For example:

- Changes in access to or expiration or change in terms of permits to the highly regulated and sensitive environments in which we work;
- Changes in social/political conditions or tenuous weather situations/natural disasters may require changes to sites or plans, often with little notice;
- Some aspects of programs depend on the current faculty team as well as the goodwill and generosity of individuals, communities, and institutions which lend support.

Please be advised that these or other variables may require changes before or during the program. Part of the SFS experience is adapting to changing conditions and overcoming the obstacles that they may present. In other words, this is a field program, and the field can change.

Course Overview

Biodiversity encompasses the variety of different kinds of living organisms on the earth's surface including plants, animals (vertebrates and invertebrates), fungi, and microbes (viruses and bacteria). It also includes species diversity, genetic diversity, and diversity of terrestrial and aquatic ecosystems, together with their associated evolutionary and ecological processes. Fundamentally, biodiversity makes human life on earth possible, and it has many values, some intrinsic and others utilitarian. The intrinsic value of biodiversity refers to its inherent worth, which is independent of its value to humans, especially for economic benefit, and essentially its inalienable right to exist on the earth's surface. For instance, biodiversity is an integral part of ecosystems that provide key ecological life supporting services such as nutrient cycling, water purification, pollination, carbon sequestration and climate regulation. For utilitarian values, biodiversity constitutes a panoply of resources from which humans can obtain a wide range of benefits including fuel, medicine, food, shelter, and raw materials for industries. Nature-based tourism, for example, benefits directly from the recreational value of biodiversity. Biodiversity has profound influence in shaping who humans are, how humans relate with each other and the world around them in various contexts, producing unique and diverse cultures. Likewise, humans, through various cultural, political, and socio-economic activities shape biodiversity resulting in multiple consequences. Politics, markets and capital and religion are integral in shaping use or misuse, conservation or destruction of biodiversity around the world.

While the "Age of the Anthropocene" is still debatable in various social science disciplines, what remains steadfast is that humans have changed our world in ways that have negatively affected species, rendering some extinct, while others endangered and on the verge of extinction. Each species that is lost triggers the loss of other species within landscapes or ecosystems. Poor politics, globalization and market capitalism are largely blamed for species decline in the world today. The decline and extinction of species also means loss of livelihoods and change in cultural practices for indigenous human communities around the world. Policy, technological and market-based interventions to abate the loss or vulnerability of species require meaningful and just cross-country collaboration, participation of local communities, change in production and consumption patterns, and respect for human rights and cultural diversity. Where interventions have contravened these principles, conservation of endangered species have resulted into further species decline, human conflicts, violence, dispossession of indigenous and local communities, economic inequalities, and violation of human rights. New conservation efforts, at least since "sustainable development" emerged as a buzzword, must consider a balance of human and non-human species concerns. North-South and South-South collaborations must be meaningful and embrace equal treatment, and local communities who coexist with endangered species must be integrated in the conservation agenda and efforts and considered as conservationists in their own right.

Conservation is, therefore, a deeply human endeavor in multiple dimensions. Humans influence nature that they are part of, and nature also plays a role in shaping humans' social, economic, and political world. Conservation cannot, therefore, be fully understood and practiced from a pure natural science perspective. Exploring human dimensions of conservation, using heuristic tools and concepts from social sciences, is indeed essential in realizing the desired holistic approach needed to restore biodiversity to pre-1970s levels. This course will focus on the human dimensions of conservation of endangered species in Kenya. The course will examine and expand the students' understanding of the multiplex relationships between people, the endangered species, and their environment, including associated natural resources. In the process, it will explore how people's behavior, values and knowledge influence and are affected by decisions on management of endangered species. The

overarching question to be addressed is how to achieve a healthy interaction between politics, economics, cultures, and technology so that populations of endangered species are conserved and restored in a manner that values humans wellbeing as well. The course will use a wide range of social sciences knowledge and tools, but mostly Anthropology and Political Ecology, to effectively incorporate societal values into conservation planning, technology, and decision-making around selected endangered species in Kenya, and to build stronger and more diverse partnerships. Students will also learn human dimensions concepts, the tools and methods that can be used in conservation research, outreach, and communication.

Course Case Study

Across the globe, Kenya is renowned for its rich biodiversity that span the air, water, and land; a key natural wealth that makes the country a conservation hub and tourism destination. Historically, there was less concern about the conservation of the country's biota resources and their habitats, but this has rapidly changed in the last decades, and many species are at risk of being extinct. Some key causes of decline in population of some species are linked to anthropogenic causes such as overhunting or overharvesting, impacts of native species, emergence of diseases, habitat degradation or loss. Other causes for the decline are inherent demographic and genetic phenomena of some species themselves like cheetah, and more recently climate change. Recent evidence suggests that deforestation and habitat destruction are prime direct and indirect causes of reported rampant decline in numbers of species in the country. Overexploitation (hunting, bush meat, illegal killing due to human wildlife conflicts, conversion of wildlife dispersal areas and blocking of migration corridors) are also important drivers of large mammal decline. Countrywide infrastructure and expansion of human settlements have equally become key drivers of species loss.

Kenya's first National Wildlife Census in 2021 revealed that there are dangerously few numbers of some wildlife iconic species, including the black rhino. The census, which lasted three months, established that 5 species are "critically endangered". These are: Tana River Mangabey, with 1,650 individuals, Black Rhinoceros (897 individuals), Hirola antelope (497 individuals), Sable Antelope (51 individuals), and Roan Antelope with 15 individuals. According to the IUCN criteria, this designation corresponds to the highest degree of risk, indicating these species have a 50% likelihood of going extinct within ten years or three generations. The census also established relatively low numbers of 9 species which have been classed as "endangered". These are: African elephant, African lion, Cheetah, White Rhinoceros, Eastern Mountain bongo, Grevy's Zebra, African Wild Dog, Nubian Giraffe and Sitatunga. In the list of species of concern are: Lesser Kudu, hippopotamus, Thomson's gazelle and generally all species of giraffes. The striped hyaena, sitatunga, leopard, white rhino, Lelwel hartebeest and Rothschild's giraffe are also listed in multiple sources as species of conservation concern due to declining numbers. Lions, leopards, and elephants are listed as 'vulnerable' in the IUCN Red List but as endangered according to Kenya's principal conservation law, the Wildlife Conservation and Management Act (Kenya 2013), because of their immense value in conservation and tourism in the country.

This course zooms into endangered large mammals because, in Kenya, these currently dominate political and academic discussions around conservation. For instance, human wildlife conflicts that threaten conservation largely is largely associated with many of these endangered large mammals than in other megafauna and flora. Land tenure transformation that has seen an expanding agriculture in conservation areas tend to affect the habitats and behavior of endangered large mammals. For example, migration of African elephants populates the many policy and academic debates on opening of wildlife corridors. Illegal trade on live wildlife and wildlife parts are often common with the large mammals, including cheetah, Rhino and African elephants. Therefore, while this course will generally look at

endangered species, specific attention is given to large mammals because of prevailing discourse around them in Kenya.
The conservation areas of focus in this course are:

1. Amboseli ecosystem, in southwest Kenya, which is home to some of the few remaining large tuskers (African elephants with huge tusks). Maasai rangeland of the Amboseli ecosystem is undergoing major land use changes since land subdivision that gave way to expansion of irrigated agriculture. The Amboseli ecosystem has also seen some of the most vibrant interventions on human-elephant conflicts.
2. Maasai Mara ecosystem, which is one of the key tourist destinations of in Kenya, is home to endangered and iconic species including African lions, cheetah, and Black rhino. Unethical tourism in Maasai Mara has direct effect on Cheetah conservation. Maasai Mara ecosystem is home to some of the best community conservancies and demonstrate success stories of involving Maasai communities in conservation. In addition, Maasai Mara is part of the larger Mara-Serengeti ecosystem, and therefore presents a good case for understanding cross-border collaborations in conserving endangered large mammals.
3. Laikipia Conservation area in Central Kenya, where the largest populations of both black and white rhinos can be found in Kenya. Laikipia is home to Kenya's private conservancies. Land tenure in Laikipia is embedded in Kenya's colonial history and therefore adds a different political debate in the conservation of endangered species.

In these diverse landscapes, students will examine how past and contemporary pastoral and agropastoral societies in Kenya (Maasai and Samburu) coexist with endangered species. Learning will also dive into the role of institutions (laws and policies and organizational networks) in shaping present day conservation efforts of endangered species in Kenya. Established and emerging issues including community conservation, human wildlife conflicts, gender dynamics, wildlife enterprises, international crimes, securitization and remilitarization of conservation, animal rights and justice will be explored in relation to endangered species such as Black Rhino, White Rhino, African Elephants, African Lions, Cheetah, Rothchild Giraffes, Chimpanzees etc. Students will examine the influence of traditional beliefs and attitudes in natural resource use and conservation practices to understand the current and future management of natural resources in the region. The influence of modern lifestyle, market capitalism, conservation and management practices, national policies and laws as well as land uses and socio-political and economic changes among the Maasai people will be evaluated.

Learning Objectives

This course takes the perspective that conservation landscapes are the co-produced outcome of human and ecological processes that interact across scales. The goal will be to understand what factors influence people's different interactions with endangered species, and how social sciences' heuristic tools and knowledge can be harnessed to ensure sustainable management and conservation of endangered species. At the end of this course students will be able to:

1. Use social science research tools and concepts in studying and understanding conservation of endangered species.
2. Examine how challenges and opportunities of conserving endangered species in local contexts are embedded in global and national political and economic processes.
3. Appraise local and community-centered approaches to solving challenges facing conservation of endangered species.

4. Investigate how the socio-economic, cultural, and political context of local communities can influence solutions to resources which they share with endangered species e.g., land, water, vegetation, salt licks etc. in Kenya's conservation areas.
5. Design, using knowledge from social sciences, strategies that contribute to solving anthropogenic problems facing conservation of endangered species in our world today.

Assessment

The evaluation breakdown for the course is as follows:

Assessment Item	Value (%)
Integration of storytelling methods for endangered species conservation	20
Local interviews and communication solutions	20
Human-elephant conflicts in Amboseli	20
Participation	10
Final Exam	30
TOTAL	**100**

Integration of storytelling methods for endangered species conservation (20%)

Students are required to make short video clips, compile, and edit into 15-minute educative film on selected endangered large mammals. They are required to employ storytelling techniques in educating the audience. They record the short clips during field exercises for all the courses, expeditions, home stays and park visits. Students then compile the video clips into one film of 15 minutes. During HDE 23, students show their 15-minute film to an audience comprising of fellow students, faculty, and a few invited stakeholders. Finally, students will upload the video on YouTube channel for SFS Kenya.

Local interviews and communication solutions (15%)

Students will use material (data and information) from interviews with Maasai pastoralists, observation at Maasai livestock market in Kimana and interviews with Osiligi Women Network to create a product (poster, marketing brochure, marketing film, or a proposal etc.) that aim to address gaps that are identified during FEXs.

Human-elephant conflicts in Amboseli (15%)

Students will conduct interviews with farmers in villages in Imbirikani Group Ranch. Students will gather and analyze data. Students will then work in groups to write a joint paper from the exercise.

Participation (10%)

Everybody should be prepared for each academic session. This implies reading the materials for each session with enough detail to be able to ask relevant questions and to participate in analytical discussions about the key issues. Active participation during classes, discussions, assignments, and hikes is expected.

Final Exam (10%)

The exam will comprise of 5 short answer questions and essay questions. Students will be required to answer any 3 of the 5 questions provided. Students will be expected to demonstrate an understanding of complex issues around human dimensions of endangered species conservation and to locate them in their political, economic, and cultural contexts as appropriate.

Grading Scheme

A	95.00 - 100.00%	B+	86.00 - 89.99%	C+	76.00 - 79.99%	D	60.00 - 69.99%
A-	90.00 - 94.99%	B	83.00 - 85.99%	C	73.00 - 75.99%	F	0.00 - 59.99%
		B-	80.00 - 82.99%	C-	70.00 - 72.99%		

General Reminders

Readings – Assigned readings and hand outs (exercises/assignments) will be available prior to the scheduled activities. Course readings must be read and clarification on issues sought where necessary since ideas and concepts contained in them will be expected to be used and cited appropriately in assigned course essays and research papers.

Plagiarism – Using the ideas or material of others without giving due credit – is cheating and will not be tolerated. A grade of zero will be assigned for anyone caught cheating or aiding another person to cheat either actively or passively (e.g., allowing someone to look at your exam).

Deadlines – Deadlines for written field exercises and other assignments are posted to promote equity among students and to allow faculty ample time to review and return assignments in good time. As such, deadlines are firm, and extensions will only be considered under the most extreme circumstances. Late assignments will incur a 10% penalty for each hour that they are late. This means an assignment that is five minutes late will have 10% removed. an assignment that is one hour and five minutes late will have 20% of the grade deducted.

Participation – Since we offer a program that is likely more intensive than you might be used to at your home institution, missing even one lecture can have a proportionally greater effect on your final grade simply because there is little room to make up for lost time. Participation in all components of the program is mandatory because your actions can significantly affect your experience and that of your classmates have while at CWWS. Therefore, it is important that you are prompt for all course activities.

Course Content

Type: L: Lecture, **FL:** Field Lecture, **GL:** Guest Lecture, **FEX:** Field Exercise, **F:** Film, **D:** Discussion

*Readings in **Bold** are required.

No	*Title and outline*	*Type*	*Time*	*Readings*
1	**Introduction to SFS Kenya program** This lecture will introduce students to the human aspects and ethnic composition in Kenya's key conservation areas. The lecture focuses on general livelihoods and human activities that impinge on conservation of endangered species in Kenya, and especially the Amboseli, Maasai Mara and Laikipia ecosystems.	L	1 hour 40 mins	
2	**Anthropological factors of species decline in former Kimana and Imbirikani Group Ranches** This travelling lecture will explore issues related to land tenure transformation, changes in settlement patterns,	FL	1 hour 40 mins	

No	Title and outline	Type	Time	Readings
	cultural beliefs about species and how these affect species decline in the Amboseli ecosystem. It involves a drive through the former Kimana Group Ranch and Imbirikani during which Faculty will make strategic stops to demonstrate to the students the following: land uses, water resources availability, Maasai homesteads and their lifestyle and general state of the landscape environment. This lecture and HDE 01 will collectively ground students in understanding the human dimensions of the ecosystem and their influence on conservation.			
3	**Historical background of conservation practice and thought** *Film: A place without people (54 min)* This film tackles the history of the creation of world-famous conservation areas in Africa, and the associated human rights issues. Focusing on Tanzania's Serengeti and Ngorongoro parks, the film shines a light on the intersection of conservation, land use, community livelihoods and the tourism industry, which has similarities with Kenya.	L	1 hour 40 mins	**Nelson (2003).** **Cockerill, K., & Hagerman, S. (2020).** Kothari et al. (2013).
4	**Integrating storytelling in the science of conserving endangered large mammals in Kenya** In this lecture, the faculty discusses Storytelling as a useful tool that conservation scientists and managers can use to educate, in compelling ways, a wider audience on the dynamics of conserving endangered large mammals in Kenya. Examples are discussed in class and thereafter faculty gives a semester-long assignment. Students are required to work in groups throughout the semester to create a 10 -15 -minute film in which they use storytelling methods to educate a digital audience about endangered species of their choice. To film scenes and landscapes, students will integrate this assignment in all Field Exercises, Expeditions and Guest Lectures, for all the courses. Students will create a YouTube Channel for Kenya Program and upload the films there. On the last day, Faculty and some stakeholders are invited to watch and review the films.	L	1 hour 40 mins	**Green, S. J., Grorud-Colvert, K., & Mannix, H. (2018).** Swanson, S. S., & Ardoin, N. M. (2021).
5	**Preparations for Field exercises** In this class the faculty shall brief students on the objectives and procedures for the upcoming FEXs. Students will be brief on Faculty expectations and assignments that shall emanate from the all the FEX.	L	1 hour 40 mins	

No	Title and outline	Type	Time	Readings
6	**Pastoral transformations and resilience amongst Amboseli Maasai** In this FEX, students will conduct in-depth semi-structured interviews with Maasai pastoralists to learn about the changes in their pastoral practices in response to land tenure reforms and land use transformations, climate change and spread of community conservancies in the Amboseli ecosystem. Students will learn why Maasai pastoralism is resilient to these changes.	FEX	3 hours	**Tugjamba, N., et al. (2023).** **Huho, J. M., et al. (2011).** Fratkin, E. (2001). Ameso, E. A., et al. (2018).
7	**Excursion at the Kimana livestock market** Students will visit Kimana livestock market and actively observe the processes that shape the marketing and selling livestock by Maasai. The intention is for students to learn about significance of pastoralism, as a land-use that is compatible with conservation, in local economies.	FEX	3 hours	**Kipaya, K. G., Nguhiu, P., & Munga, L. (2020).** Quinlan, R. J., Rumas, I., Naisikye, G., Quinlan, M. B., & Yoder, J. (2016).
8	**Students' presentation on pastoralism, livestock market and women involvement** In this seminar, students will present their creative work from the FEXs. The idea is for students to come up with products e.g. poster, marketing film, a theory of change or any infographic or proposal that pastoralists or women at the Osiligi Women Group can use to improve their livelihoods of projects.	D	3 hours	
9	**Cottage industry, diversification of livelihoods and local innovations in Maasai women involvement in conservation** In this FEX students will have conversation with and participate in livelihoods and conservation activities of the Osiligi Women Network in Oloitokitok. Students will learn about local innovations that Maasai women use to engage in conservation. The purpose is to help students appreciate innovative ways of empowering Maasai women in addressing gender inequalities in conservation and societal politics.	FEX	3 hours	Irandu, E. M., & Shah, P. (2014). Ondicho, T. G. (2022).
10	**Wildlife crimes, investigations and prosecution in Kenya** In this guest lecture by KWS law enforcement officer, students learn about wildlife conservation law and policy in Kenya, especially those that are related to elephant conservation. The speaker will talk about the common crimes on endangered species in Kenya, how these crimes are reported and investigated, as well as the prosecution of suspects. The speaker will talk about some challenges they face in their daily work of investigations and prosecution.	L	1 hour 40 mins	Morris, C. (2024).

No	Title and outline	Type	Time	Readings
11	**Human-Wildlife Conflicts (HWC) in Kenya** This lecture will be centered on the intricacies of Human-Wildlife Conflicts in Kenya. Key concepts will be defined and the general nature scope of HWCs in Kenya will be discussed. Students will watch 2 short films to augment the lecture. The faculty will then guide students to prepare data collection tools for field exercise.	L	1 hour 40 mins	**Evans. L and Adams (2018).** **Shaffer et al. (2019).**
12	**Preparations for FEX** In this class, the faculty works with students to prepare data collection material for FEX. Faculty will guide students on how to prepare interview guides that students will use to study human wildlife conflicts in the Imbirikani Group Ranch.	L	50 minutes	
13	**Human-Elephant Conflicts (HECs) in the Amboseli Ecosystem** Students will assess the typology of HECs among smaller scale farmers, their causes, patterns, impacts and mitigation. Students will use a pre-designed survey to gather data.	FEX	4 hours	
14	**Lion hunting and contemporary Maasai *rite de passage*** Faculty gives an introductory lecture about traditional lion hunting as a *Rite de passage.* Students will then watch a film about current alternative forms of *rite de passage* for Maasai Morans that have replaced lion hunting. Students will learn how these new forms of *rite de passage* of Maasai Moran have contributed to lion conservation.	L; FL	1 hour 40 mins	**Hazzah L, Bath A, Dolrenry S, Dickman A, Frank L (2017).** **Goldman, M. J., De Pinho, J. R., & Perry, J. (2013).**
15	**The political economy of ivory and live animal trade** In this lecture students will learn about factors that mediate market-embedded crimes on endangered species. Local and international trade networks for Ivory and live animal species are explored and how these markets are sustained and linked with other forms of cross border crimes e.g. money laundering, terrorism, drug trafficking etc. Rationalities of commodification e.g. conservation gains of trophy hunting, infatuations with eastern medicines and alternative medicines, fame and class will be discussed.	L	1 hour 40 mins	**Brennan, A. J., & Kalsi, J. K. (2015).** **Anderson, B., & Jooste, J. (2014).**
16	**Excursions at the Maasai Mara Beada Museum** This excursion into a mall beads museum in Maasai Mara will enable students to learn more about pastoral identities in Kenya's rangelands. Furthermore, it will give more insights into the connection of Maasai's material culture and ontologies around specific wildlife species that share the same landscape with pastoral Maasai.	FL	2 hours 30 mins	Nyambura, R., Campus, N., Nyamache, T., & Nyabisi, E. (2012).

No	Title and outline	Type	Time	Readings
17	**Community-based conservation and its role in wildlife conservation in the Maasai Mara ecosystem** In this guest lecture, a manager of a community conservancy in the Maasai Mara ecosystem will talk about how the conservancy model helps in creating conservation space for giraffes within the context of changing land tenure. Lecture will also explore modalities of engaging communities in giraffe conservation.	GL	1 hour 40 mins	Muriithi, J. K. (2022). Cavanagh, C. J., Weldemichel, T., & Benjaminsen, T. A. (2020).
18	**Mitigating Human-Carnivore conflicts in Maasai Mara Ecosystem: Nature, scope and mitigation measures** This guest lecture will explore some of ways through which human activities conflicts with large carnivore in the Maasai Mara ecosystem and their trends over the last 5 years. The guest lecture will explain the implications of this scenario to conservation of those species and discuss some of the mitigation and adaptation strategies.	GL	1 hour 40 mins	Broekhuis, F., Kaelo, M., Sakat, D. K., & Elliot, N. B. (2020). Schuette, P., Creel, S., & Christianson, D. (2013).
19	**development of Chimpanzee Sanctuary in Ol Pajeta** In this field lecture the guide take students through the history of Ol Pajeta Chimpanzee rescue sanctuary. Students will learn some of the human -induced abuses facing Chimpanzees, trafficking routes, and countries of origin. Issues of animal welfare and rights will be discussed extensively	FL	1 hour 30 mins	
20	**Introduction to Virunga Mountain gorilla conservation - a brief history of the context** Guest lecturer from DFGF will give the historical context of Gorilla conservation, putting emphasis on past threats, legal transformation and coordination challenges.	GL	1 hour 30 mins	**Robbins et al. (2011).**
21	**Conservation Gallery: Mountain gorilla conservation** Students will immerse themselves in this interactive exhibit that tells the story of mountain gorilla conservation; students will engage in learning about unique features of gorilla behavior and ecology, the history of mountain gorilla conservation in the region, and key stakeholders and conservationists that have dedicated their lives to this work.	FL	1 hour 40 mins	
22	**Human dimensions of conservation around VNP** Climate change and biodiversity loss are tightly linked and have cascading effects, amplifying existing risks to local communities related to poverty, lack of access to critical resources and educational opportunities, and exclusion from governance. Students will learn about Fossey Fund programs to engage with local communities to support them in safeguarding gorilla habitat through community-led decisions to improve their livelihoods.	L	50 mins	**Sabuhoro E, et al. (2023).** **Snyman S, et al. (2023).** **Tolbert S, et al. (2023).** Tuyisenge MF, et al. (2023). Ndayishimiye, et al. (2023). McGuinness SK (2016).

No	Title and outline	Type	Time	Readings
23	**Visit to mushroom cooperative** Students will visit one of the Fossey Fund-supported Mushroom Cooperatives near Volcanoes National Park to learn about the power of mushrooms and their potential to transform local communities for the improvement of the environment, and social and economic development.	FL	3 hours	
	Review of Storytelling Videos Students begin by showing their films to faculty, stakeholders and peer. The audience comments on the videos. Thereafter, Faculty shall do an overall review or recap of the course, highlighting main themes and messages, and outline topics that students should put more effort and focus for the exam. Students will have a chance to seek further clarifications on course topics and practical as well as administrative matters of the exam.	D	3 hours	
	Exam Review Faculty shall do an overall review or recap of the course, highlighting main themes and messages, and outline topics that students should put more effort and focus on for the exam. Students will have a chance to seek further clarifications on course topics and practical as well as administrative matters of the exam.	D	50 mins	
	Total		**50**	
	UMN Instructional Hours*		**60**	

**UMN defines* an instructional hour as a 50-minute block. SFS syllabi are written in full 60-minute hours for programming purposes. Therefore 50 full hours = 60 UMN instructional hours (for four credit courses) and 25 full hours = 30 UMN instructional hours (for two credit courses).*

Reading List

*Readings in **Bold** are required

1. Ameso, E. A., Bukachi, S. A., Olungah, C. O., Haller, T., Wandibba, S., & Nangendo, S. (2018). Pastoral resilience among the maasai pastoralists of Laikipia County, Kenya. *Land*, *7*(2), 78.
2. Anderson, B., & Jooste, J. (2014). Wildlife poaching: Africa's surging trafficking threat. *Africa Center for Strategic Studies*.
3. Brennan, A. J., & Kalsi, J. K. (2015). Elephant poaching & ivory trafficking problems in Sub-Saharan Africa: An application of O'Hara's principles of political economy. *Ecological Economics*, 120, 312-337.
4. Broekhuis, F., Kaelo, M., Sakat, D. K., & Elliot, N. B. (2020). Human–wildlife coexistence: attitudes and behavioural intentions towards predators in the Maasai Mara, Kenya. *Oryx*, 54(3), 366-374.
5. Cavanagh, C. J., Weldemichel, T., & Benjaminsen, T. A. (2020). Gentrifying the African landscape: The performance and powers of for-profit conservation on southern Kenya's conservancy frontier. *Annals of the American Association of Geographers*, *110*(5), 1594-1612.

6. Cockerill, K., & Hagerman, S. (2020). Historical insights for understanding the emergence of community-based conservation in Kenya: international agendas, colonial legacies, and contested worldviews. *Ecology and Society*, 25(2).
7. Evans, L. A., & Adams, W. M. (2018). Elephants as actors in the political ecology of human–elephant conflict. *Transactions of the Institute of British Geographers*, 43(4), 630-645.
8. Fratkin, E. (2001). East African pastoralism in transition: Maasai, Boran, and Rendille cases. *African studies review*, *44*(3), 1-25.
9. Goldman, M. J., De Pinho, J. R., & Perry, J. (2013). Beyond ritual and economics: Maasai lion hunting and conservation politics. *Oryx*, 47(4), 490-500.
10. Green, S. J., Grorud-Colvert, K., & Mannix, H. (2018). Uniting science and stories: perspectives on the value of storytelling for communicating science. *Facets*, 3(1), 164-173.
11. Hazzah L, Bath A, Dolrenry S, Dickman A, Frank L (2017). From Attitudes to Actions: Predictors of Lion Killing by Maasai Warriors. *PLoS ONE* 12(1): e0170796. doi:10.1371/journal. pone.0170796.
12. Huho, J. M., Ngaira, J. K., & Ogindo, H. O. (2011). Living with drought: the case of the Maasai pastoralists of northern Kenya. *Educational Research*, *2*(1), 779-789.
13. Irandu, E. M., & Shah, P. (2014). The Role of ecotourism in promoting women empowerment and Community Development: some reflections from Kenya. *Journal of tourism and hospitality management*, *2*(6), 245-259.
14. Kothari, A., Camill, P., & Brown, J. (2013). Conservation as if people also mattered: policy and practice of community-based conservation. *Conservation and society*, 11(1), 1-15.
15. Kipaya, K. G., Nguhiu, P., & Munga, L. (2020). Socio-economic factors influencing the adoption of improved livestock farming practices among members of livestock cooperatives in Kajiado County, Kenya. *World J. Innov. Res*, *8*, 1-9.
16. McGuinness SK (2016). Perceptions of crop raiding: effects of land tenure and agro-industry on human–wildlife conflict. *Animal Conservation* 19:578-587. https://doi.org/10.1111/acv.12279
17. Morris, C. (2024). Inside the Wildlife Crime Courtrooms of Kenya. *International Policy Digest*.
18. Muriithi, J. K. (2022). Role of conservancy-based tourism in the management of natural ecosystem services in the Maasai Mara, Kenya. *Management of tourism ecosystem services in a post pandemic context*, 11-29.
19. Ndayishimiye E, Eckardt W, Fletcher AW. (2023). Human-Wildlife Conflict in Golden Monkeys (Cercopithecus mitis kandti) of the Volcanoes National Park, Rwanda. *International Journal of Primatology* 44: 856–880. https://doi-org.proxygw.wrlc.org/10.1007/s10764-023-00365-8
20. Nelson, R. H. (2003). Environmental Colonialism "Saving" Africa from Africans. *Independent Review*, 8(1), 65-86.
21. Nyambura, R., Campus, N., Nyamache, T., & Nyabisi, E. (2012). Beads and Beadwork in Africa. *Journal of Education and Social Sciences*, *1*(2), 33-41.
22. Ondicho, T. G. (2022). Empowering Kenyan Maasai Women Through Cultural Bomas Tourism. *Pathways to African Feminism and Development: Journal of the African Women Studies Centre*, *7*(1), 29-47.
23. Quinlan, R. J., Rumas, I., Naisikye, G., Quinlan, M. B., & Yoder, J. (2016). Searching for symbolic value of cattle: tropical livestock units, market price, and cultural value of Maasai livestock. *Ethnobiology Letters*, *7*(1), 76-86.
24. Robbins MM, Gray M, Fawcett KA, Nutter FB, Uwingeli P, et al. (2011) Extreme Conservation Leads to Recovery of the Virunga Mountain Gorillas. *PLoS ONE* 6(6): e19788. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0019788
25. Sabuhoro E, Ayorekire J, Munanura IE. (2023) The Quality of Life and Perceived Human-Wildlife Conflicts among Forest Communities around the Mountain Gorilla's Virunga Landscape in Africa. *Sustainability* 15 (3): 2248. https://doi.org/10.3390/su15032248

26. Shaffer, L. J., Khadka, K. K., Van Den Hoek, J., & Naithani, K. J. (2019). Human-elephant conflict: A review of current management strategies and future directions. *Frontiers in Ecology and Evolution*, 6, 235.
27. Schuette, P., Creel, S., & Christianson, D. (2013). Coexistence of African lions, livestock, and people in a landscape with variable human land use and seasonal movements. *Biological Conservation*, 157, 148-154.
28. Snyman S, Fitzgerald K, Bakteeva A, Ngoga T and Mugabukomeye B (2023) Benefit-sharing from protected area tourism: A 15-year review of the Rwanda tourism revenue sharing programme. *Frontiers in Sustainable Tourism* 1:1052052. https://doi.org/10.3389/frsut.2022.1052052
29. Swanson, S. S., & Ardoin, N. M. (2021). Communities behind the lens: A review and critical analysis of visual participatory methods in biodiversity conservation. *Biological Conservation*, *262*, 109293.
30. Tolbert S, Munyarugero I, Uwingeli P, Ndagijimana F (2023) Assessing the drivers of illegal resource use to improve wildlife conservation interventions. *Biological Conservation* 281: 109983 https://doi.org/10.1016/j.biocon.2023.109983
31. Tugjamba, N., Walkerden, G., & Miller, F. (2023). Adapting nomadic pastoralism to climate change. *Climatic Change*, *176*(4), 28.
32. Tuyisenge MF, Kayitete L, Tuyisingize D, O'Malley M, Stoinski T, van der Hoek Y. (2023). Status of African authorship among conservation research output from sub-Saharan Africa: An African perspective. *Conservation Science and Practice* 5: e13013. https://doi.org/10.1111/csp2.13013.