



S F S THE SCHOOL
FOR FIELD STUDIES

Environmental Policy and Socioeconomic Values

SFS 3020

4 credits

The School for Field Studies (SFS)
Center for Wildlife Management Studies
Karatu, Tanzania

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 may present. In other words, the elephants are not always where we want them to be, so be flexible!

Course Overview

This course explores the social, cultural, economic, and political context of the relationship between people and wildlife. The theoretical underpinnings draw on principles from human ecology, ecological anthropology, micro-and macroeconomics, development theory, philosophy, and law. To understand present and future wildlife management in Kenya and Tanzania, this course examines influences of traditional attitudes, national land tenure regimes and policy framework, international influences, economic conditions, natural resource potentials and constraints, and regulation on human-wildlife interactions. Wildlife conservation in Tanzania (specifically in the Tarangire/Manyara Ecosystem) is examined in context of other competing land use alternatives in which its potential economic contribution to enhancing rural livelihoods is weighed against its constraints (e.g., depressed livelihoods associated with human-wildlife conflicts).

Learning Objectives

Through interactive learning and experiential activities, such as lectures, field exercises, class discussions, field lectures, this course attempts to expose students to the following concepts and skills:

1. Obtain some understanding of environmental policies, regulatory systems, and institutional arrangements in natural resource conservation: historical evolution of policies and land tenure regimes – hence create and encourage a deeper appreciation of the complexity of wildlife conservation issues in general, and specifically in Tanzania.
2. Understand the constraints to conservation of wildlife among resource-poor rural populations.
3. Show how the economic, socio-political, and cultural context of the local community influences possible solutions to land use problems and wildlife conservation.
4. Consider and examine models of participatory natural resource conservation
5. Impart skills in practical environmental problem solving (such as participatory resource assessment and social surveys), encourage independent and critical analysis, and evaluation of conservation issues necessary to carry out directed research.
6. Encourage interactive learning and experiential education through class discussions, debates, role-playing and exposure to a variety of learning situations and contexts in the field.
7. Explore strategies and examine options that could mitigate natural resource degradation specifically and environmental deterioration in general.

CWMS Research Direction

In this program we prepare students to answer the following question:

How can changes in land use and resource availability in the Maasai steppe of Tanzania be managed in such a way as to foster the well-being of local communities whilst safeguarding and promoting biodiversity conservation?

Case Study Overview and Background

Title of Case Study

The influence of biophysical and socio-cultural factors on wildlife and other natural resources within the Tarangire-Manyara Ecosystem of northern Tanzania

Case Study Question

How can land use practices and resource potentials in TME be sustainably managed to enhance the economic livelihood of the local people and at the same time promote wildlife conservation?

Background

The Tarangire-Manyara Ecosystem (TME) is one of the key wildlife conservation areas in Tanzania, and part of the Northern tourist circuit that brings in the famous parks of Serengeti, Ngorongoro, Lake Manyara, Tarangire, Arusha and Mt. Kilimanjaro National Parks. TME is estimated to comprise about 35,000 km². Tarangire and Manyara National Parks are the core protected areas in the TME exclusively designated for photographic tourism. Other forms of protected areas in TME include Wildlife Management Areas, (WMA) managed by local communities for tourism investment, game control areas (GCAs) and game reserves (GRs) managed by the Wildlife Division in which consumptive utilization such as trophy hunting is allowed. Consumptive utilization is also allowed in open areas that fall under the village lands designated as hunting blocks. All protected areas in TME have porous boundaries, thus, wildlife migrate freely between protected areas and dispersal areas in community village land. This leads to high levels of human-wildlife interactions and the ensuing human-wildlife conflicts. For many decades, the primary inhabitants of TME have been pastoralist Maasai communities with low human population density. However, over the past three decades there has been a rapid increase in human population mainly due to immigration with consequent changes in land use leading to expansion of agriculture and human settlement. This has resulted in blockage of migratory wildlife routes (such as into Simanjiro plains and to Lake Manyara through Kwakuchinja Corridor), habitat fragmentation and created more opportunities for human-wildlife conflicts. These pose an increasing threat to environmental and wildlife conservation in the TME.

Other challenges in the TME include tourism impacts, ecological changes, rampant poaching of wildlife due to inadequate law enforcement and the overall wildlife population declines. Unplanned settlements and increase in human population lead to insularization of Tarangire and Manyara National Parks. Unplanned development of tourist accommodation facilities (such as camp sites and lodges) around the Parks, although benefiting the local communities, exert a high demand on water, reducing quantity of water discharge into lake Manyara, reducing water quality due to potential pollution from sewerage and domestic effluents. Poorly regulated hunting of wildlife in dispersal and game control areas outside the Parks threaten populations of critical wildlife species. Expanding irrigation in nearby rice farms in Mto wa Mbu town, heavy siltation, pesticide application, pollution caused by erosion and depletion of vegetation due to farming in the highland catchment areas affect the ecology and biodiversity of Lake Manyara and the adjacent wetlands. This is compounded by an increase in the human population in the catchment areas. The ground water in Mto wa Mbu is close to the surface and therefore increasing population, unplanned settlement and pollution which arise from overflowing pit latrines further pollute lake Manyara. The fall 2023 semester will provide a series of lectures and carefully designed research projects implemented by the students to explore these conservation issues in the TME through a multidisciplinary approach. Student projects will focus on providing baseline assessments, critical analysis and investigation with the aim of providing information to contribute towards sustainable environment and natural resource management, promote wildlife conservation and livelihood improvement for local communities.

Assessment

The evaluation breakdown for the course is as follows:

Assessment Item	Value (%)
Analyzing protected area-adjacent community perspectives on wildlife	15
Assessing Human Wildlife Conflict Issues among agro-pastoralists	25
Community-based natural resource conservation Assessment	20
Participation	10
Final Exam	30
TOTAL	100

Analyzing protected area-adjacent community perspectives on wildlife (15%)

This is a field exercise which imparts skills in practical environmental problem solving. Students will learn the use of at least two PLA techniques commonly used - transect walks, resource mapping, matrix ranking, interview, etc. Groups of students will work together to produce a terrain profile of land and resources used around Manyara Catchment area. Each group will present field experience to the rest of the class. Each student will individually write a concise critique report on the exercise (focusing on results and discuss the strengths and weaknesses of the technique they used).

Assessing Human Wildlife Conflict Issues among agro-pastoralists (25%)

This assignment will be based on a study in villages adjacent Tarangire and Lake Manyara National Parks, involving social surveys with Agropastoral communities to assess the perception and attitudes towards problem wildlife and wildlife conservation. During focus group discussions, students will interact and ask questions to community members. Students will work in groups of 2-3, practicing social research skills for data collection and analysis. A short, written report will synthesize and interpret the data.

Community-based natural resource conservation Assessment (20%)

This field exercise will expose students to the effectiveness of the local community-based effort to conserve natural resources. in Tanzania. To do this, students will visit Kambi ya Simba village in Karatu district and conduct assessment on the status of river Simba catchment area. The students will work in small groups and establish data collection circle plots of 5.0 meters radius at 5-, 30- and 55-meters length on each transect perpendicular to riverbank. The distance from one transect to the next should be 100 meters apart. After field work, the group must compile and calculate the field data to get status of an area. Thereafter, each student will write an individual report *discussing* how effective is community's participation in management of natural resources on their land and propose strategies that Kambi ya Simba community will use to succeed in their resources conservation / management.

Final Exam (30%)

Students will undertake a written exam that accounts for 30% of their final grade. The main objective of the final exam is to motivate students to: study, assess developed skills. capacity, and evaluate their performance.

Participation (10%)

This assessment strategy seeks to encourage students to actively participate in class discussion, and to motivate students to do the background reading and preparation for a class session. Active participation will encompass active learning in class, lab, field exercises, during expeditions, and group work.

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

Honor Code/Plagiarism – SFS places high expectations on their students and we hold students accountable for their behaviors. SFS students are held to the honor code below. SFS has a zero-tolerance policy towards student cheating, plagiarism, data falsification, and any other form of dishonest academic and/or research practice or behavior. Using the ideas or material of others without giving due credit is cheating and will not be tolerated. Any SFS student found to have engaged in or facilitated academic and/or research dishonesty will receive no credit (0%) for that activity.

“SFS does not tolerate cheating or plagiarism in any form. While participating in an SFS program, students are expected to refrain from cheating, plagiarism and any other behavior which would result in a student receiving credit for work which they did not accomplish on their own. Students are expected to report any instance of cheating or plagiarism by others.”

Deadlines – Deadlines for written and oral assignments are instated to promote equity among students and to allow faculty ample time to review and return assignments before others are due. As such, deadlines are firm; extensions will only be considered under extreme circumstances. Late assignments will incur a penalty of 10% of your grade for each day you are late. After two days past the deadline, assignments will no longer be accepted. Assignments will be handed back to students after a one-week grading period. Grade corrections for any assessment item should be requested in writing at least 24 hours after assignments are returned. No corrections will be considered afterwards.

Content Statement – Every student comes to SFS with unique life experiences, which contribute to the way various information is processed. Some of the content in this course may be intellectually or emotionally challenging but has been intentionally selected to achieve certain learning goals and/or showcase the complexity of many modern issues. If you anticipate a challenge engaging with a certain topic or find that you are struggling with certain discussions, we encourage you to talk about it with faculty, friends, family, the HWM, or access available mental health resources.

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 course is mandatory, it is important that you are prompt for all activities, bring the necessary equipment for field exercises and class activities, and simply get involved.

Course Content

Type- **CD**: Class Discussion, **FD**: Field Discussion, **L**: Lecture, **FEX**: Field Exercise, **FL**: Field Lecture, **GL**: Guest Lecture, **TL**: Traveling Lecture

No	Title and outline	Type	Time (hrs)	Required Readings
EP 1	Case study introduction An overview of the prevailing socio-economic and policy forces as the drivers of Natural Resources status in the Tarangire-Manyara Ecosystem.	L	1.0	
EP 2	The political economy of Tanzania Context within which the major changes on natural resources policies occur examining the historical, economic, and socio-political changes of the Tanzania in relation to Natural Resources Management changes.	L	2.0	UNDP (2012). Kallonga, E., et al. (2003). Mwabukojo A., Edson (2019).
EP 3	Elements of environmental policy: Issues relevant to the Tarangire-Manyara Ecosystem Historical perspective of the environmental problems and rise of environmentalism. Provides a framework and rationale behind the course structure and content. Highlights on how EP relates with the ecology, natural resource management and socio-cultural classes.	L	2.0	
EP 4	Land use changes and human activities in the catchment area of lake Manyara and its consequence to wildlife and environmental conservation constraints The opportunity to see and clearly understand the challenges facing Lake Manyara and Tarangire National Parks by observing human encroachment and effects through agriculture, urbanization, and human settlements. The discussion will be based on the impacts of the country's history and developmental policies on land and resource tenure, values and utilizations principles learned in class, and how these translate into real world observations. Students will pinpoint the un-exploited potentials on land use in the catchment areas that will improve local livelihood and enhance environmental conservation and propose the mitigations/adaptations that will improve land use management in the catchment area.	TL	1.5	
EP 5	Wildlife Law Enforcement in Tanzania First-hand information on how wildlife law enforcement is carried out in Tanzania. Learn various techniques for gathering information on the poaching status in each area.	GL	2.0	

No	Title and outline	Type	Time (hrs)	Required Readings
EP 6	<p>Participatory Learning and Action (PLA) I: principles and survey methods</p> <p>Origin of PLA. Pillars and application in research. This course chronicles the factors which led to the adoption of participatory approaches and provides its conceptual foundation. In addition, it takes students through some of the most used techniques.</p>	L	2.0	Kumar, S. (2002). Lelo Francis, et al. (1995).
EP 7	<p>Participatory Learning and Action (PLA) II: Analyzing protected area-adjacent community perspectives on wildlife</p> <p>Field exercise which imparts skills in practical environmental problem solving. Students are assigned different participatory tools to collect information. Students will learn the use of at least two common PLA techniques - transect walks, resource mapping, matrix ranking, interview, etc. to identify key land and resources use. They will use the techniques to probe landscape resources and/or community resource-interaction in the Lake Manyara catchment area.</p>	FEX	3.0	Same as for EP 06 above
EP 8	<p>Evolution and principles of community conservation policies</p> <p>This class examines why the involvement of local people/communities in wildlife conservation is essential and how this reintegration has been achieved in different parts of the world.</p>	L	2.0	Hackel, D. J. (1998). Nelson, Fed, and Arun Agrawal (2008). Kideghesho, J.R. (2010).
EP 9	<p>Climate Changes: Impacts and Adaptations.</p> <p>The class examines the history and causes of global warming that led to weather and climate changes. Explore observed changes in weather and climate, impacts on livelihood caused by these changes, human response to these impacts, how these responses impact biodiversity, and how wildlife adapt to climate changes.</p>	L	3.0	Case, M. (2016). Namwaka O. Mwaikinda (2011). Shemshanga C., Omambia N.A., and Gu Y. (2010).
EP 10	<p>Documenting local peoples' climate change experiences in Tarangire-Manyara Ecosystem</p> <p>Students will conduct interviews and focus group discussions to understand how local people in TME have really observed change in weather and climate over period, what effects these changes have on livelihood and natural resources, how are they responding to these observed changes and what are the implications of these responses on livelihood and natural resources / biodiversity.</p>	FEX	4.0	Same as for EP 09 above

No	Title and outline	Type	Time (hrs)	Required Readings
EP 11	<p>Social Research Techniques</p> <p>There are several steps and much to consider when collecting data on sociological research especially on aspects of human interrelation to landscape (and its natural resources). To expose students to social research techniques that they may apply during their Directed Research projects, students will learn approaches to sociological research, research methods (survey tools, focus groups, etc.), and ethical aspects of conducting social research.</p>	L; LAB	3.0	Mildread L. Pattern. (2001).
EP 12	<p>Assessing Human Wildlife Conflict Issues among agro-pastoralists in the Tarangire-Manyara Ecosystem (Tanzania) areas.</p> <p>This will involve visiting an agro-pastoralist community and investigating aspects of human-wildlife conflicts. From their interaction with the local community, students will identify the various forms of human wildlife conflicts, the wildlife species which cause the most damage, estimate the social-economic losses incurred, and assess the effectiveness of various wildlife control methods. At the same time, they will be assessing the local peoples' attitudes towards wildlife in the area. This exercise explores policy response to human-wildlife conflict. The whole class will visit community areas and investigate aspects of human-wildlife conflicts. Information obtained in this field exercise will be used for writing groups report assignment</p>	TL; FEX	3.5	A.H.M Raihan Sarker (2010). Hoare (2007). Kissui, B.M. (2008). Philip Muruthi (2005). Shemweta, D.T.K. and Kideghesho, J.R. (2000).
EP 13	<p>Pros and cons of community-based conservation: The role of Wildlife Management Areas (WMAs) in achieving the objectives of conservation in Tanzania.</p> <p>This course is divided into two parts: class and traveling lecture. The class lecture will build students' understanding on the WMA establishment processes and impacts on wildlife conservation in Tanzania. The traveling lecture will be conducted at Burunge WMA whereby students will have a field experience on socioeconomic impacts of WMAs and will discuss how to overcome hurdles facing the WMA program at the community level.</p>	L; TL	4.0	Nelson.F., and Blomley, T. (2007). Paul Wilfred (2010). URT (2003). Bluwstein J., et al. (2016). Tor A. Benjaminsen., et al., (2013).
EP 14	<p>Culture as a tool for tourism Development and Wildlife Conservation</p> <p>Watch the film <i>Milking the Rhino</i>. This film will show how wildlife and tourism can both benefit from the</p>	L	3.0	

No	Title and outline	Type	Time (hrs)	Required Readings
	culture of the local community. Also, it shows how climate change has accelerated human-wild life conflicts, its consequences and adaptation measures. Further, it shows how benefits accrued from wildlife conservation can catalyze environmental degradation.			
EP 15	Environmental conservation initiatives in Karatu District (case study) Natural resource conservation issues in the Karatu district by highlighting conservation challenges and current initiatives.	TL; GL	3.5	
EP 16	Community based natural resource conservation Assessment. This field exercise will expose students on the effectiveness of the local community-based effort to conserve forest and water resources.	FEX	3.5	Blomley, T., and Ramadhani, A. (2007). Meshack, C. and Raben, K. (2007). Pfliegner, K., and Moshi, E. (2007).
EP 17	Land and resource tenure regimes in Tanzania 'Ngorongoro Conservation Area Case Study' This will involve assessment of the implications of land and resource tenure policies and laws about natural resources conservation and management. This will enable students to identify the categories of public lands, tenure systems on each category of land and other natural resources, and the gaps in the policy and laws that do not enhance resources conservation and management, or the livelihood of local communities.	L; FL	4.0	Kauzeni, A.S., Sechambo, F.C., and Juma, I. (1998). Boone B. R, et al. (2006). Kameri-Mbote, P. (2005).
EP 18	Conservation advocacy and outreach initiatives Students will have an opportunity to gain experience and be able to evaluate the effectiveness of various conservation outreach programs implemented by different stakeholders in TME such as Tanzania National Park Authority (TANAPA), Chemchem Foundation etc. as directed by the natural resources policies. The guest lecturer (s) will give a talk, then takes students to show them outreach activities being done in the area.	GL; FL	4.0	
EP 19	EP Course overview and Exam review Overall review of the course, and outline of topics students should focus on for the exam. Students will have a chance to ask questions and seek further clarifications on course topics.	L; CD	1.0	
	Total contact hours		52	

Reading List

1. **A.H.M Raihan Sarker (2010)**. Human-Wildlife Conflicts: A comparison between Asia and Africa with special reference to elephants. In Conservation of Natural Resources. Some African and Asian Examples. (Edited by Gereta, E.J and Roskaft, E.), Tapir Academic Press, Trondheim 2010.
2. **Blomley, T., and Ramadhani, A. (2007)**. Participatory Forest Management in Tanzania. An overview of status, progress and challenges ahead. The Arc Journal, No. 21 September, 2007. ISSN 0856 – 8715 pp 3 – 5.
3. **Bluwstein J., et al. (2016)**. Austere Conservation: Understanding Conflicts over resource Governance in Tanzania Wildlife Management Areas. Conservation and Society 14 (3): 218-231, 2016.
4. **Boone B.R., et al. (2006)**. Cultivation and Conservation in Ngorongoro Conservation Area, Tanzania. Hum Ecol (2006) 34:809 – 828
5. **Hackel, D. J. (1998)**. Community conservation and the future of Africa’s wildlife. Conservation Biology 13: 726 – 734
6. **Hoare (2007)**. ‘Vertically Integrated Human-Elephant Conflict Management System in Tanzania:’Background and Next steps. Extracted in part from a final report to WWF International.
7. **Kallonga, E., Rogers, A., Nelson, F., Ndoinyo, Y., and Nshala, R. (2003)**. Performing Environmental Governance in Tanzania: Natural Resources Management and the Rural Economy. Non-Commissioned Paper. Sub-theme 1: Good Governance and the Rule of Law: Utopia or Reality? Forum To Assess Development Policies of Tanzania.
8. **Kameri-Mbote, P. (2005)**. Sustainable management of wildlife resources in East Africa. A critical Analysis of the Legal, Policy and Institutional frameworks. IELRC Working Paper No. 5.
9. **Kauzeni, A.S., Sechambo, F.C., and Juma, I. (1998)**. Private and Communal Property Ownership Regimes in Tanzania.
10. **Kideghesho, J.R. (2010)**. Wildlife Conservation in Tanzania: Whose Interest Matters? In: Conservation of Natural Resources. Some African and Asian Examples. (Edited by Gereta, E.J and Roskaft, E.), Tapir Academic Press, Trondheim. pp 82 – 110.
11. **Kissui, B.M. (2008)**. Livestock predation by lions, leopards, spotted hyenas, and their vulnerability to retaliatory killing in the Maasai steppe, Tanzania
12. **Kumar, S. (2002)**. Methods for Community Participation: A complete Guide for Practitioners. ITDG Publishing. London pp23 – 52 (Required)
13. **Lelo Francis, et al. (1995)** PRA Field Handbook for PRA Practitioners: The PRA Programme Egerton University, Njoro-Kenya (Required)
14. **Meshack, C. and Raben, K. (2007)**. Balancing Rights, Responsibilities, Costs and Benefits in the Management of Catchment Forests. The Arc Journal, No. 21. September, 2007 pp 6–7.
15. **Michael Case (2016)**. Climate change impacts on East Africa: A review of the scientific literature.
16. **Mildred L. Pattern (2001)**. Questionnaire Research: A Practical Guide. Second edition. Pyczak Publishing. ISBN 1-884585-32-9.
17. **Mwabukojo A, Edson (2019)**. Mapping the Development Progress in Tanzania since Independence. University of Bucharest -11 December 2019. Online at: <https://mpr.ub.uni-muenchen.de/97534>
18. **Namwaka O. Mwaikinda (2011)**. Climate Change in Tanzania: The policy picture. Tanzania Natural Resources Forum. www.forumcc.org
19. **Nelson, Fed and Agrawal, Arun (2008)**. Patronage or Participation? Community Based Natural Resource Management Reform in Sub-Saharan Africa. Development and Change. 39(4) 557-585

20. **Nelson F. and Blomley, T. (2007).** Is Participatory Forest Management Working? Eating from the same plate: Integrating Community-based Wildlife and Forest management. The Arc Journal ISSN 0856 – 8715 pp 11 – 13.
21. **Paul Wilfred (2010).** Towards Sustainable Wildlife Management Areas in Tanzania. Mongabay.com Open Access Journal - Tropical Conservation Science Vol. 3 (1):103-116, 2010
22. **Pfliegner, K. and Moshi, E. (2007).** Is Joint Forest Management viable in protection forest reserves? Experience from Morogoro Region. The Arc Journal, No. 21 September, 2007. ISSN 0856 – 8715 pp 17 – 20.
23. **Philip Muruthi (2005).** Human Wildlife Conflict: Lessons Learned From. AWF's African Heartlands. AWF Working papers, AWF, Nairobi, Kenya
24. **Shemshanga C., Omambia N.A., and Gu Y. (2010).** The Cost of climate change in Tanzania: impacts and adaptations. Journal of American Science, 2010: 6(3)
25. **Shemweta, D.T.K. and Kideghesho, J.R. (2000).** Human-Wildlife Conflicts in Tanzania: What Research and Extension Could Offer to Conflict Resolution. Proceedings of the 1st University Wide Conference, 5th -7th April, 2000; Vol.3.
26. **Tor A. Benjaminsen., et al. (2013).** Wildlife Management in Tanzania: State Control, Rent Seeking and Community Resistance. <https://doi.org/10.1111/dech.12055>
27. **UNDP (2012).** African Human Development Report 2012: Towards a Food Secure Future. Statistical Annex: 153 - 172
28. **URT (2003).** Reference Manual for Implementing Guidelines for the Designation and Management of Wildlife Management Areas (WMAs) in Tanzania, Ministry of Natural Resources and Tourism.