

Natural Resource Management Seminar ENVI-3005 (3 credits)

Madagascar: Biodiversity and Natural Resource Management

This syllabus is representative of a typical semester. Because courses develop and change over time to take advantage of unique learning opportunities, actual course content varies from semester to semester.

Course Description

This interdisciplinary course introduces students to a range of key policies and practices for the management of the unique and endemic natural resources in Madagascar. Using conceptual approaches drawn from environmental justice and political ecology, students explore diverse terrestrial and marine resources in a range of locales and consider the realities and challenges of developing effective and equitable natural resource management systems. Key themes through which the issues are explored during the course include livelihoods and stakeholder analyses, protected area and community-based management systems and the cultural practices and their influence on natural resource management.

Learning Outcomes

Upon completion of the course, students will be able to:

- Assess and discuss the major environmental management policies used for conservation and sustainable use of natural resources in Madagascar;
- Describe and discuss selected natural resource challenges from the perspectives of local livelihoods, cultural practice, and economic systems;
- Critically analyze the management challenges from conservation and community perspectives for a range of natural resources including forests, mines, and fisheries;
- Explain the varying roles of different stakeholders in natural resource management in Madagascar considering the particular perspectives of social justice and environmental sustainability.

Language of Instruction

This course is taught in English, but students will be exposed to vocabulary related to course content through in-country expert lectures and field visits in a wide range of venues and regional locales.

Instructional Methods

SIT's teaching and learning philosophy is grounded in the experiential learning theory developed by Kolb (1984; 2015) and informed by various scholars, such as Dewey, Piaget, Lewin, among others. Experiential learning theory recognizes that learning is an active process that is not confined to the formal curriculum; "knowledge is created through the transformation of experience" (Kolb, 2015, p. 49). Learning involves both content and process. Learning is holistic and happens through various life experiences upon which students draw to generate new ways of knowing and being. Learning involves a community and is a lifelong endeavor. Learning is transformational. The suggested four step-cycle of a *concrete experience, reflective observation, abstract conceptualization, and active experimentation* embedded in the experiential learning model is not linear and might not always happen in that specific order, as any learning is highly context dependent. These stages of taking part in a shared experience; reflecting on that experience by describing and interpreting it; challenging their own assumptions and beliefs to generate new knowledge; and ultimately applying new knowledge, awareness, skills, and attitudes in a variety of situations and contexts are important for students to engage in to become empowered lifelong learners.

Assignments and Evaluation

Assignment Descriptions and Grading Criteria

1) Natural Resource Management - Presentation (20%)

From the various lectures delivered throughout the semester as well as assigned readings, in small groups, students produce a presentation highlighting an important environmental justice issue. Groups identify their own presentation topics and consult additional readings beyond the course syllabus in order to generate their presentations. Students present their topic and then facilitate and manage discussion, which includes input from faculty, staff, and program partners where relevant.

2) Natural Resource Management – Essay (30%)

Students write a brief summary essay (3-5 pages) on the origins, management systems, and future prospects of Protected Areas and Community-Based Natural Resource Management in Madagascar. All essays should express the student's own perspectives, emphasize the differences between these management systems and their relevant benefits, challenges, disadvantages, and successes.

3) Mid-term Portfolio (40%)

The mid-term portfolio encourages students to reflect on the various lectures delivered throughout the semester, as well as their exposure to class discussions, field experiences, and assigned readings. This exercise enables students to draw upon a multitude of concepts and experiences, facilitating the synthesis of information.

On the other hand, students will be encouraged to reflect on what they have learned and experienced during the semester with their homestays. They will pose various types of questions, encompassing not only their daily lives and future perspective of life but also their

perspectives on natural resource management. The Mid-Term Portfolio may take several forms and will be discussed in detail in class prior to the assignment.

4) Effort and Participation (10%)

This includes active involvement in lectures, readings, discussions, and excursions using the following criteria:

- Attendance - promptness to class and positive presence in class.
- Active Listening - paying attention in class and during field excursions, asking appropriate questions, showing interest and enthusiasm (this includes body language), entertaining contradictory perspectives, taking notes.
- Involvement in Class Discussions - either in small or large groups, sharing knowledge. This means challenging yourself to speak up if you usually don't, and also means allowing others to speak if you are a person who tends to dominate class discussions.
- Group Accountability – positive participation in the group during field excursions and classes; not keeping others waiting.
- Displaying Respect – culturally appropriate interaction with hosts, SIT program staff, SIT lecturers and communities.

Assessment

Natural resource Management - Presentation	15%
Natural resource Management – Writing Assignment	30%
Mid-term Portfolio	40%
Effort and Participation	10%

Attendance and Participation

Due to the nature of SIT Study Abroad programs, and the importance of student and instructor contributions in each and every class session, attendance at all classes and for all program excursions is required. Criteria for evaluation of student performance include attendance and participation in program activities. Students must fully participate in all program components and courses. Students may not voluntarily opt out of required program activities. Valid reasons for absence – such as illness – must be discussed with the academic director or other designated staff person. Absences impact academic performance, may impact grades, and could result in dismissal from the program.

Late Assignments

SIT Study Abroad programs integrate traditional classroom lectures and discussion with field-based experiences, site visits and debriefs. The curriculum is designed to build on itself and progress to the culmination (projects, ISP, case studies, internship, etc.). It is critical that students complete assignments in a timely manner to continue to benefit from the sequences in assignments, reflections and experiences throughout the program.

Example: Students may request a justified extension for one paper/assignment during the semester. Requests must be made in writing and at least 12 hours before the posted due date and time. If reason for request is accepted, an extension of up to one week may be granted at

that time. Any further requests for extensions will not be granted. Students who fail to submit the assignment within the extension period will receive an 'F' for the assignment.

Grading Scale

94-100%	A
90-93%	A-
87-89%	B+
84-86%	B
80-83%	B-
77-79%	C+
74-76%	C
70-73%	C-
67-69%	D+
64-66%	D
below 64	F

Program Expectations

- Show up prepared. Be on time, have your readings completed and points in mind for discussion or clarification. Complying with these elements raises the level of class discussion for everyone.
- Have assignments completed on schedule, printed, and done accordingly to the specified requirements. This will help ensure that your assignments are returned in a timely manner.
- Ask questions in class. Engage the lecturer. These are often very busy professionals who are doing us an honor by coming to speak.
- Comply with academic integrity policies (no plagiarism or cheating, nothing unethical).
- Respect differences of opinion (classmates', lecturers, local constituents engaged with on the visits). You are not expected to agree with everything you hear, but you are expected to listen across difference and consider other perspectives with respect.

SIT Policies and Resources

Please refer to the [SIT Study Abroad Handbook](#) and the [Policies](#) section of the SIT website for all academic and student affairs policies. Students are accountable for complying with all published policies. Of particular relevance to this course are the policies regarding: academic integrity, Family Educational Rights and Privacy Act (FERPA), research and ethics in field study and internships, late assignments, academic status, academic appeals, diversity and disability, sexual harassment and misconduct, and the student code of conduct.

Please refer to the SIT Study Abroad Handbook and SIT website for information on important resources and services provided through our central administration in Vermont, such as [Library resources and research support](#), [Disability Services](#), [Counseling Services](#), [Title IX information](#), and [Equity, Diversity, and Inclusion](#) resources.

Course Schedule

**Please be aware that topics and excursions may vary to take advantage of any emerging events, to accommodate changes in our lecturers' availability, and to respect any changes that would affect student safety. Students will be notified if this occurs*

Module 1: Environmental Policy and Stakeholders in Madagascar

This module introduces students to a broad range of policies, practices and stakeholders engaged in environmental management in Madagascar. The history of forestry, conservation, land use and environmental impact policies are considered through lectures, readings and sites visits. Critical engagement with the ongoing challenge of balancing biodiversity conservation, local resource use needs and economic development activities such as mining form a central part of this module. Students draw upon readings, documentaries, and visits to a range of stakeholders around the forests and mining areas in the Fort Dauphin hinterland.

Site Visits: communities impacted/displaced by the mine, Moramanga, Andasibe

Readings:

Corson, C., Campbell, L. M. and MacDonald, K. I. 2014. Capturing the personal in politics: Ethnographies of global environmental governance. *Global Environmental Politics* 14, 3: 21–40. http://dx.doi.org/10.1162/GLEP_a_00237

Corson, C. 2017. A history of conservation politics in Madagascar. *Madagascar Conservation & Development* 12, 1: 49–60. <http://dx.doi.org/10.4314/mcd.v12i1.4>

Desbureaux, S. and Brimont, L. 2015. Between economic loss and social identity: The multi-dimensional cost of avoiding deforestation in eastern Madagascar. *Ecological Economics* 118: 10–20. <http://dx.doi.org/10.1016/j.ecolecon.2015.07.002>

Ferraro, P. J. 2002. The local costs of establishing protected areas in low-income nations: Ranomafana National Park, Madagascar. *Ecological Economics* 43, 2–3: 261–275. [http://dx.doi.org/10.1016/S0921-8009\(02\)00219-7](http://dx.doi.org/10.1016/S0921-8009(02)00219-7)

Module 2: Fisheries: Livelihoods and Policies

This module introduces students to the marine and coastal areas of Madagascar, their socio-economic importance for local communities and the Malagasy government, as well as exposing students to the policies developed for managing fisheries. The program base in Fort Dauphin, the main source of domestic and exports of pelagic and freshwater fish, shrimp, lobster, and oyster, provides examples of emergence of formalized community-based fishery management, commercialization, and value in addition to local produce as well as traditional fisheries systems. Despite these positive trends, there is evidence of significant declines in the

fisheries. Students will learn from technical fisheries experts, from government agencies, local NGOs and directly from fisher peoples themselves to gain an understanding of the complex social and ecological systems that make up Madagascar's fisheries.

Site Visits: Tulear, Mangily

Readings:

Barnes-Mauthe, M., Oleson, K. L. L., & Zafindrasilivonona, B. (2013). The total economic value of small-scale fisheries with a characterization of post-landing trends: An application in Madagascar with global relevance. *Fisheries Research*, 147, 175–185. <https://doi.org/10.1016/j.fishres.2013.05.011>

Bruggemann, J. H., Rodier, M., Guillaume, M. M. M., Andréfouët, S., Arfi, R., Cinner, J. E., Pichon, M., Ramahatratra, F., Rasoamanendrika, F., Zinke, J., & McClanahan, T. R. (2012). Wicked Social-Ecological Problems Forcing Unprecedented Change on the Latitudinal Margins of Coral Reefs: the Case of Southwest Madagascar. *Ecology and Society*, 17(4). <https://doi.org/10.5751/es-05300-170447>

Cooke, A. et al. (2003). Marine and Coastal Ecosystems. In S. Goodman & J. Benstead (Eds.), *Natural History of Madagascar* (pp. 179–208). University of Chicago Press.

LeManach, F. et al. (2012). Unreported fishing, hungry people, and political turmoil: the recipe for a food security crisis in Madagascar? *Marine Policy* (36). (pp. 218–225).

Module 3: Protected Areas and Community-Based Natural Resource Management

This module introduces students to the principles and practices of natural resource management in a diverse range of Madagascar's terrestrial protected areas. Students explore the renowned state managed National Parks and a range of forms of community managed areas, including the devolution of forest management responsibilities to local user groups. The module uses lectures, readings, and presentations from conservation professionals as well as field visits to a range of parks, covering diverse habitats from rainforest to the unique spiny forests. Students will gain an understanding of conservation planning processes including public participation, the development of management plans, habitat restoration and ecological monitoring activities.

Site Visits: Andasibe

Readings

Cullman, G. (2015). Community Forest Management as Virtualism in Northeastern Madagascar. *Human Ecology*, 43(1), 29–41. <https://doi.org/10.1007/s10745-015-9725-5>

Gardner, C.J. (2011). IUCN management categories fail to represent new, multiple-use protected areas in Madagascar, *Oryx*, 45(3), (pp. 336–346)

Lockwood, M., Worboys, G. L., and Kothari, A. (2006). *Managing Protected Areas: A Global Guide*, Earthscan.

Rasolofoson, R. A., Ferraro, P. J., Ruta, G., Rasamoelina, M. S., Randriankolona, P. L., Larsen, H. O., & Jones, J. P. G. (2016). Impacts of Community Forest Management on Human Economic Well-Being across Madagascar. *Conservation Letters*, 10(3), 346–353. <https://doi.org/10.1111/conl.12272>

Module 4: Agro-pastoral Livelihoods, Culture and Development

This module will focus on experiential learning to facilitate students in developing an understanding of rural livelihoods. Students will learn about economic and socio-cultural perspectives on the agricultural activities of the Malagasy community. This understanding is deepened through the week-long homestay with a farming family and a Malagasy student counterpart from the regional university UDA (*Universite de l'ity*). The module also allows students to gain knowledge of the characteristics of the aid and rural development sector in Madagascar. This includes exposure to the realities of food insecurity, nutrition, sanitation, agricultural outreach and intensification, while ensuring students maintain a critical perspective on the impacts and self-sustaining nature of the aid industry.

Site Visits: Rural Village Stay in the hinterland of Antananarivo

Readings

Freudenberger, K. (2010). *Rapid Rural Appraisal and Participatory Rural Appraisal: A Manual for CRS Fieldworkers and Partners*, Catholic Relief Services.

Ellis, F. (2000). "Chapter 2: A Framework for Livelihood Analysis". *Rural livelihoods and diversity in developing countries* (pp. 28–51). Oxford University Press.

Moyo, D. (2009). *Dead aid: why aid is not working and how there is a better way for Africa*. Penguin.