

International Sustainable Development Studies Institute

สถาบันการศึกษาการพัฒนาที่ยั่งยืนนานาชาติ

Elephants and Conservation Ecology: Thailand and Laos

Short Name: Thai & Lao Elephant Conserv

Credits: 4

Contact Hours: 68

- Lecture Hours: 28
- Direct Studies: 30 (80 at 2:1 ratio)

Course Description

Asian elephants are critical to the biodiversity of Southeast Asia, playing an essential role in maintaining the health of ecosystems through seed dispersal and habitat modification. However, due to habitat loss, human-wildlife conflict, and poaching, their populations have been significantly reduced. These majestic creatures face numerous threats, making their conservation vital not only for their survival but also for the preservation of the regions they inhabit. Their cultural and ecological significance makes them an invaluable focus for conservation efforts.

This immersive program offers a unique opportunity to study the conservation of Asian elephants through field-based experiences in Thailand and Laos. Students engage with elephant care in wildlife sanctuaries, elephant camps, and re-wilding centers, learning about the ecology, behavior, and health of these iconic animals. The course explores conservation challenges and strategies in a real-world context, emphasizing the intersection of biology, cultural practices, and conservation efforts.

Participants gain practical experience in managing human-elephant conflicts, conducting research on elephant health, and understanding their ecological role in tropical environments. Through site visits to UNESCO World Heritage areas and involvement in local conservation projects, students will acquire the skills needed to assess and support elephant conservation initiatives. The course also integrates cultural perspectives on elephants, examining the societal and ethical aspects of their management in Southeast Asia.

Course Objectives

The objectives for this course are to:

- Develop an understanding of elephant biology, behavior, and ecology.
- Analyze conservation strategies, including challenges and opportunities.
- Evaluate the cultural, economic, and ecological roles of elephants in Thai and Lao societies.
- Build skills in field research, ecological assessment, and cultural immersion.

Methodology

This course combines lectures, readings, and discussions with hands-on field experiences. Activities include:

- Field research and ecological surveys.
- Cultural immersion through homestays and local collaborations.
- Guest lectures by conservationists, ecologists, and local experts.
- Visits to elephant sanctuaries, national parks, and UNESCO World Heritage sites.

Grading and Assessment

Engagement

This means participation in and out of the classroom, being an active member of the course, and being fully present and engaged in the field. This includes participation in discussions during seminars and in the village, etc. This also means being an active and supportive member of the course, including as a designated leader and active follower/self leadership. 10

Writing

Seminar and Observation Notes: An important component of learning to observe and analyze the issues during this course is taking notes in class as well as keeping an on-going daily journal of observations outside the classroom. Please put the date at the top of each page. 5

Field Research Notebook: A more structured way of taking notes and learning outside the classroom assigned to specific field studies. 15

Essays: There are two (2) essays during the course. Essays should be 4-5 pages long in your journal, and cover the following points: 20

- How this issue or topic links to the overall topic of the course. (1)
- Why you are interested in this specific issue or topic. (1)
- A description and analysis of the specific issue and why it is important. (5)
- Reference to interviews or observations during the course. (2)
- Other questions that this issue raises for you to explore further. (1)

Independent Field Research Project (IFRP)

Each student will choose an issue **related to the course** to study independently. This should be a combination of research, observations, and analysis of a topic that the student is interested in. The **emphasis is primarily on field observations** drawing on field studies as well as independent observations. This is not a book report or literature review, but field research. **Students must receive instructor approval for their chosen topic/issue.**

Proposal: The IFRP proposal is a written outline and a short presentation to the class explaining the question, how it is related to the course topic, how data will be gathered, and any potential challenges you may anticipate running into. 1 page typed as well as an in-class presentation. 10

Progress update: An update during the course on what the student has discovered about their topic so far, what further questions this raises, any challenges and how they have been overcome, as well as further information they will be looking for during the second half of the field study. 1 page written in your notebook as well as an in-class presentation. 5

Final Presentation: On the last day of the course each student will give a five minute presentation on their research. Focus on clarity, field observations, interviews/discussions with community members, and analytical depth. 5-10 slides in PDF format. 15

Organization for final presentation

1. What did you study/research focus? How is this related to the course topic? (2)
2. How did you study this, including observations and interviews? (5)
3. What did you learn? Findings and analysis. (10)
4. Further questions this raises for you. (2)
5. Final slide of references / interviews. (1)

Final Exam

The final exam will be a comprehensive review of course topics with an emphasis on what was learned during the field portion of the course. There will be 10 short answer questions. Students may use their notes but not their readers or the internet during the exam. 20

TOTAL 100

Course Schedule

Week 1: Introduction and Thung Yai-Huai Kha Khaeng Wildlife Sanctuary

This week will introduce the course and field research methods. We will start the course in Chiang Mai at ISDSI's campus. We will then travel to the Thung Yai-Huai Kha Khaeng Wildlife Sanctuary. While there we will be talking with part rangers and other stakeholders, as well as studying the wild elephant population.

Observing Asian elephants in the wild is particularly challenging due to their preference for dense, forested habitats, which can be difficult to access and navigate. Their extensive home ranges and ability to move quietly through thick vegetation complicate tracking efforts. Additionally, human presence can alter their behavior, requiring researchers to adopt non-intrusive observation methods. Studying these elephants necessitates patience and a deep understanding of their ecological behaviors, as their movements and interactions with the environment are often subtle and fleeting.

Activities:

- Introductory seminars on elephant biology and conservation.
- Field visits to observe wild elephants.
- Lectures on UNESCO World Heritage management.

Focus Topics:

- Elephant behavior and ecology.
- Human-elephant conflict.

Readings:

- Olivier, R. C. D. (1978). Conservation of the Asian Elephant. *Environmental Conservation*, 5(2), 146. <https://www.cambridge.org/core/journals/environmental-conservation/article/abs/conservation-of-the-asian-elephant/64CC17F4B095E524146469DD039256B0>
- Fritz, H. (2017). Long-term field studies of elephants: understanding the ecology and conservation of a long-lived ecosystem engineer. *Journal of Mammalogy*, 98(3), 603–611. <https://academic.oup.com/jmammal/article-abstract/98/3/603/3855617>
- Sukumar, R. (2003). *The Living Elephants: Evolutionary Ecology, Behavior, and Conservation*. Oxford University Press, Chapters 3-5, pp. 45-110. <https://global.oup.com/academic/product/the-living-elephants-9780195107784>
- Fernando P., Leimgruber P. (2011). Asian elephants and seasonally dry forests. In McShea W. J., Davies S. J., Bhumpakphan N. (Eds.), *The ecology and conservation of seasonally dry forests in Asia* (pp. 151–163). Washington, DC: Smithsonian Institution Scholarly Press. http://www.ccrsl.org/userobjects/2631_478_Fernando-11-DryForest.pdf
- Sukumar, R. (1989). *The Asian Elephant: Ecology and Management*. Cambridge University Press, Chapters 2 and 4, pp. 22-78. <https://copiesdirect.nla.gov.au/items/import?source=cat&sourcevalue=192087>
- Lekagul, B., & McNeely, J. A. (1977). *Mammals of Thailand*. Association for the Conservation of Wildlife, pp. 220-240. <https://search.worldcat.org/title/3953763>

Week 2: Chiang Mai and Northern Thailand

This week will focus on elephant care and conservation in Chiang Mai, including visiting and learning about different approaches to elephant care and conservation. There are a large number of elephant camps, sanctuaries, and conservation centers with different approaches to work with elephants, including focus on reproduction, rehabilitation, and other initiatives. We will also be learning about standard of care for elephants, certification efforts, and other work being done to ensure high standards for elephants under human care.

Elephant veterinary care in Northern Thailand plays a crucial role in ensuring the health and well-being of the region's Asian elephant population. Elephant clinics and hospitals provide specialized medical care,

addressing a variety of health issues ranging from physical injuries to chronic conditions such as arthritis or foot problems. We will study both modern approaches as well as that of mahouts who bring traditional knowledge of herbal remedies and other indigenous knowledge about elephant health and care.

Activities

- Engagements with veterinarians and conservationists.
- Visits to elephant sanctuaries.
- Exploration of Chiang Mai's cultural heritage.
- Engagements with veterinarians and conservationists.
- Visits to elephant sanctuaries.
- Exploration of Chiang Mai's cultural heritage.
- Engagements with veterinarians and conservationists.
- Visits to elephant sanctuaries.
- Exploration of Chiang Mai's cultural heritage.

Focus Topics

- Elephant health and care.
- Cultural significance of elephants in Thai traditions.

Readings

- Kontogeorgopoulos, N. (2009). "Wildlife tourism in semi-captive settings: A case study of elephant camps in northern Thailand." *Current Issues in Tourism*, Vol. 12, Issue 5, pp. 429-449. https://www.researchgate.net/publication/240535788_Wildlife_tourism_in_semi-captive_settings_a_case_study_of_elephant_camps_in_Northern_Thailand
- Lair, R. C. (1997). *Gone Astray: The Care and Management of the Asian Elephant in Domesticity*. FAO Regional Office for Asia and the Pacific, Chapters 1-3, pp. 1-65. www.fao.org/3/ac774e/ac774e00.htm
- Suter, Ingrid (2020) "Rewilding or reviewing: Conservation and the elephant-based tourism industry." *Animal Sentience* 28(3), pp. 1-4. <https://www.wellbeingintlstudiesrepository.org/animsent/vol5/iss28/3/>
- Schmidt-Burbach, J., et al. (2015). "Asian elephant (*Elephas maximus*) welfare assessment." *Animal Welfare*, Vol. 24, pp. 15-26. https://www.researchgate.net/publication/282243926_Asian_Elephant_Elephas_maximus_Pig-Tailed_Macaque_Macaca_nemestrina_and_Tiger_Panthera_tigris_Populations_at_Tourism_Venues_in_Thailand_and_Aspects_of_Their_Welfare
- Fowler, M. E., & Mikota, S. K. (2006). *Biology, Medicine, and Surgery of Elephants*. Blackwell Publishing, Chapters 7-8, pp. 120-175. <https://www.scribd.com/doc/56925823/Elephant-biology-Medicine-and-Surgery#6e061317-ed07-46e5-a654-79bed2c98a8c>
- Brown, J. L., et al. (2010). "Cortisol and stress in Asian elephants: A study of captive elephants in Chiang Mai." *General and Comparative Endocrinology*, Vol. 166, Issue 2, pp. 347-355. <https://doi.org/10.1016/j.ygcen.2010.01.002>
- Hvistendahl, M. (2019). "The Human Cost of Elephant Tourism." *The Atlantic Monthly*. <https://www.theatlantic.com/science/archive/2016/05/elephants-tourism-thailand/483138/>
- Bansiddhi, P., Brown, J. L., Khonmee, J., Norkaew, T., Nganvongpanit, K., Punyapornwithaya, V., Angkawanish, T., & Somgird, C. (2019). Management factors affecting adrenal glucocorticoid activity of tourist camp elephants in Thailand and implications for elephant welfare. *PLOS ONE*, 14(10), e0221537. <https://doi.org/10.1371/journal.pone.0221537>

Week 3: Luang Prabang and the Elephant Conservation Center (ECC)

This week we will travel to Laos and study the cultural and ecological context of elephants in a very different setting than Thailand. While there are strong cultural links and similarities between Northern Thailand and Laos, there are some important differences in terms of governance, overall levels of economic development, and pressures on elephants and local ecosystems.

We will be studying at the Elephant Conservation Center (ECC), a leading organization dedicated to the preservation of the endangered Asian elephant, offering a model for both conservation and sustainable ecotourism. ECC focuses on rescuing and rehabilitating elephants, many of which have been rescued from exploitative tourism or logging industries. The center provides a sanctuary where elephants can live in more natural conditions, receiving necessary veterinary care and attention. In addition to caring for individual elephants, the ECC is involved in broader conservation efforts, including habitat restoration and community outreach. The center also emphasizes education and awareness, working with local communities to promote the ethical treatment of elephants and the importance of preserving this iconic species. Through its combination of conservation efforts, veterinary care, and ecotourism, the ECC aims to provide a sustainable future for both elephants and the local human populations who rely on them.

Activities:

- Study of captive elephant rehabilitation.
- Exploration of Luang Prabang, a UNESCO site.
- Analysis of ecotourism and its impacts.

Focus Topics:

- Rehabilitation methods.
- Ecotourism and conservation.

Readings:

- Lainé, N. (2018). Asian Elephant Conservation: Too Elephantocentric? Towards a Biocultural Approach of Conservation. *Asian Bioethics Review*, 10(3), 279–293. <https://pmc.ncbi.nlm.nih.gov/articles/PMC7747420/>
- Duffillot, Sébastien (2019). Re: Asian Elephant Conservation—Too Elephantocentric? Towards a Biocultural Approach of Conservation. *Asian Bioethics Review* pp. 133–139. <https://pmc.ncbi.nlm.nih.gov/articles/PMC7747251/>
- Clements, H. S., et al. (2010). "Ecotourism and biodiversity conservation." *Conservation Biology*, Vol. 24, Issue 3, pp. 621–629. https://www.researchgate.net/publication/369950710_Ecotourism_and_Biodiversity_Conservation_Paradigm_Shifting_and_Future_Action
- Khamkhoun, B. (2002). The Care and Management of Domesticated Asian Elephants in Lao PDR. In Baker, I., & Kashio, M. (Eds.), *Giants on Our Hands: Proceedings of the International Workshop on the Domesticated Asian Elephant* (pp. 172–180). FAO Regional Office for Asia and the Pacific. <https://www.fao.org/4/ad031e/ad031e0j.htm>
- Schmid, V. S., Pachzelt, A., Burgstaller, J., Feigl, G., & Palmowski, T. (2021). Effects of Positive Reinforcement Training and Novel Object Exposure on Salivary Cortisol Levels under Consideration of Individual Variation in Captive African Elephants (*Loxodonta africana*). *Animals*, 11(12), 3525. <https://www.mdpi.com/2076-2615/11/12/3525>
- Wilson, M. L., Perdue, B. M., Bloomsmith, M. A., & Maple, T. L. (2015). Rates of reinforcement and measures of compliance in free and protected contact elephant management systems. *Zoo Biology*, 34(4), 431–437. <https://onlinelibrary.wiley.com/doi/abs/10.1002/zoo.21229>

Week 4: Nam Pouy Protected Area, Laos / Wrap up

The final field study section of the course will travel to the Nam Pouy Protected Area. The Nam Pouy Protected Area (NPPA) in Laos is a vital conservation region located in the central part of the country, encompassing a diverse array of ecosystems, from dense forests to riverine habitats. Spanning over 2,000 square kilometers, the NPPA is recognized for its significant biodiversity, including populations of endangered species such as the Asian elephant, which is a key focus of conservation efforts in the area. Elephants in the Nam Pouy region play an integral ecological role, particularly in seed dispersal and forest regeneration. The protected area provides a critical sanctuary for these elephants, offering them a refuge from poaching and habitat destruction, two of the major threats they face in Laos.

Efforts to conserve elephants in Nam Pouy involve monitoring and protecting their habitats, as well as addressing human-elephant conflict in local communities. The area is managed by the Lao government in collaboration with various NGOs, which support the development of sustainable livelihoods for local

populations, thereby reducing pressure on the elephant population. The NPPA is also a key site for research on elephant behavior and ecology, providing valuable data for both conservation science and the broader efforts to maintain viable elephant populations across Southeast Asia. Through its combination of habitat preservation, community engagement, and scientific research, the Nam Pouy Protected Area serves as an essential component of elephant conservation in Laos.

Activities:

- Learning about and observing elephants.
- Independent research project presentations.
- Discussions on re-wilding challenges.
- Independent Field Research Project presentations.

Focus Topics:

- Field research methodologies.
- Strategies for sustaining wild elephant populations.

Readings:

- Duckworth, J. W., Salter, R. E. and Khounbolin, K. (compilers) 1999. "The Geography and Biogeography of Lao PDR: An Overview," and "Human Use of Wildlife." *Wildlife in Lao PDR: 1999 Status Report*. Vientiane: IUCN-The World Conservation Union / Wildlife Conservation Society / Centre for Protected Areas and Watershed Management. pp. 2-22 <https://portals.iucn.org/library/sites/library/files/documents/2000-050.pdf>
- Goswami, V. R., Madhusudan, M. D., & Sukumar, R. (2021). Living with elephants: Evidence-based planning to conserve wild populations across varied land use regimes. *Frontiers in Conservation Science*, 2, 682590. <https://www.frontiersin.org/articles/10.3389/fcosc.2021.682590/full>
- Berkmüller, K., Evans, T., Timmins, R., & Vongphet, V. (1995). Recent advances in nature conservation in the Lao PDR. *Oryx*, 29(4), 253–260. <https://www.cambridge.org/core/journals/oryx/article/recent-advances-in-nature-conservation-in-the-lao-pdr/EB17D6123BC8E85ECF5DF3E5296E601F>
- Chanthasene, S., Yokoyama, S., & Ueta, H. (2022). "Willingness to Pay for Conservation of the Asian Elephant in Nakai Nam Theun National Protected Area in Laos." *Open Journal of Business and Management*, 10(3), pp. 1327–1343. <https://www.scirp.org/journal/paperinformation?paperid=117065>
- Moss, C. J. (2006). *Elephant Memories: Thirteen Years in the Life of an Elephant Family*. University of Chicago Press, Chapters 10-12, pp. 204-280. <https://press.uchicago.edu/ucp/books/book/chicago/E/bo3642478.html>
- International Union for Conservation of Nature (IUCN). (2023). Elephant range states from Southeast Asia review implementation of CITES MIKE programme. <https://iucn.org/story/202402/elephant-range-states-southeast-asia-review-implementation-cites-mike-programme-0>

Course Policies

Attendance Policy

Students are expected to be on time and attend all classes. If you are ill or otherwise need to miss a class, please inform your instructor or teaching assistant.

Academic Integrity

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in ISDSI courses are expected to complete coursework responsibilities with fairness and honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own can result in disciplinary action.

Scholastic Dishonesty

Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering forging, or misusing an academic record; or fabricating or falsifying data, research

procedures, or data analysis. Within this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an “F” or “N” for the course. If you have any questions regarding the expectations for a specific assignment or exam, ask.

Grading Standards

Letter grade	Score or percentage	Description
A	93–100	Achievement that is outstanding relative to the level necessary to meet course requirements.
A-	90–92	Achievement that is significantly above the level necessary to meet course requirements.
B+	87–89	Achievement that is significantly above the level necessary to meet course requirements.
B	83–86	Achievement that is significantly above the level necessary to meet course requirements.
B-	80–82	Achievement that meets the course requirements in every respect.
C+	77–79	Achievement that meets the course requirements in every respect.
C	73–76	Achievement that meets the course requirements in every respect.
C-	70-72	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
D+	67-69	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
D	60-66	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
F	0-59	Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an Incomplete.