E-COURSE:

Protected areas (PA) and its sustainability

Host institution	National University of Mongolia, School of Engineering and Applied Sciences
Credits	6 ECTS (optional course)
Lecturers	Namsrai Oyunchimeg (National University of Mongolia)
Level	MSc and Ph.D. course
Course duration	16 classes
Type	Research

Summary

This 3 ECTS course is about areas dedicated to protecting nature ("protected areas"), how they function, and why they are so important in preserving the resources of the environment in our rapidly developing world, and particularly in Mongolia. This course will help you learn about the problems of conservation in Mongolia and how protected areas can help solve them, from local to international levels. These topics will be discussed using WCPA best practices and field case studies from across Mongolia, including individual and group activities, seminar presentations, and reflections writing.

The target group of students

MSc and Ph.D. students in environmental science, nature conservation, and sustainable development

Prerequisites

Required courses (or equivalents):

- Environmental science
- Nature conservation
- Sustainable development and green development policy

Aims and objectives

The main purpose of this course is to incorporate some of the widely used ways to improve the protection of protected areas (and their resources) and thereby contribute to their conservation.

Furthermore, the course provides students with in-depth knowledge and skills for effective analysis, planning, and implementation of strategies and activities for managing PAs.

The course provides the students with the knowledge of:

1. The role of national parks and protected areas in an overall strategy for sustainable development;
2. The different categories of protected areas and the rationale for each;
3. The techniques for developing protected area management plan;
4. The methods and approaches for management and financing of protected areas; and
5. The major threats to protected areas and difficulties in managing national parks and protected areas.

General learning outcomes:

At the completion of the course, graduates will be equipped, with respect to protected areas, to:

- understand the primary reason and purpose of the nature protection and will understand general principles of current understanding, goals, and trends in conservation;
- understands IUCN management specifics, categories of our traditional national system of protected;
- prepare protected area management plans;
- plan and manage tourism, recreational activities, and public use;
- plan and manage community engagement processes; and
- conduct an evaluation of management effectiveness.

Applicable learning outcomes:

- be aware of protected areas policies
- apply Management Effectiveness Tracking Tool (METT)
- write a reflection, conduct interview and workshop for stakeholder engagement

Overview of sessions and teaching methods

The course will make up more of the immersive and self-reflective of teaching and learning, and avoid standing lectures and presentations where possible. It will begin with an outline of the worldwide Network of PAs, its management problems, the approach to the assessment of management effectiveness and its implementation. It will then start with exercise on establishing a management plan of protected areas and identifying risks to biodiversity in protected areas. Intriguingly, field study to meet different nature conservation partners in protected areas will coordinate (in case of online learning, it will be arranged by the student himself) to understand the actual situation, visual perception, to collect critical knowledge and datasets. Using MIRADI software application, students can draft a protected area management plan based on the findings of the field survey.

Course workload

The table below summarizes the distribution of workload on the course:

Activities	Learning outcomes	Assessment	Workload (hours)
In-class activities			
Lectures	Understanding key concepts, theories, methodology and tools	Class participation	10
Classroom debates	Understanding the trend in creatin of protected areas around the world, as well as in Mongolia as well, and their legal status and specific problems in the management of protected areas	Class participation and readiness to participate in a debate	10
Classroom assignments	Knowing policy and implementation frameworks and specific challenges in integrating them with the goals in biodiversity conservation and sustainable development goals	Class participation and preparedness for assignments	10
Assignment			
Paper review and discussion	Knowledge and the opportunity to explore essential ideas, approaches, and solutions objectively and creatively, as described in the literature	Class participation creative and School engagement innovative and constructive contributions to the discussion	30

- Application MIRADI - Application METT	- To learn the components of MIRADI and its implementation. It will include interacting with partners and gathering data, analyzing, writing reports and making presentations. - To learn the components of METT and its implementation. It will include interacting with partners and filling survey questionnaires, assessing, writing reports and making presentations.	Act independently Individual report and presentations	30
Fieldwork	Familiarity with actual circumstances, notify field experts, take photos, gather related details and information	Class participation and preparedness for discussions	30
Follow up debates and review of METT framework	To recognize METT, and protected area management concerns. This will include the METT comparative study of other tools for evaluating the management effectiveness, report preparation, and presentation.	Class participation and preparedness for discussions	30
Total			150

Grading

The performance of the student will be assessed on the basis of the following:

- Preparedness level for involvement in class discussions and seminars - 30% (out of 100%). From 100% for successful involvement and experience with the course readings to 0% for neglecting in-class discussions entirely;
- Input to group tasks and individual task presentation - 30% (out of 100%). From 100% for distinctly displayed inputs to 0% for non-participation);
- Performance in implementation in method and documenting and presentation – 40% (out of 100%). From 100% for a distinctly displayed report and presentation to 0% for non-participation):
    - Proper use of the approach - 20%
    - Report writing – 10%
    - Making presentation – 10%

Course schedule

Class	Classroom hours	Topic	Type
1	4	- Introduction to the key concepts of the protected areas: o the history of the protected areas o Importance of protected areas and protected area systems o Role and functions of protected areas	Lecture
2	4	- Categories of the protected areas and Convention on Biodiversity o Definition of protected areas o IUCN categories for protected areas o Convention on BiodivXиersity	Lecture
3	4	- Transboundary protected areas - International protected areas	Lecture Seminar
4	4	- Planning of the protected areas - 1 o Planning of the protected areas o Introduction to MIRADI software	Lecture Seminar
5	4	- Planning of the protected areas - 2 o Application of MIRADI in the management planning	Lecture Seminar
6	4	- Evaluating the management effectiveness of protected areas o Introduction to the METT o Application of METT: evaluating management effectiveness of protected areas	Lecture Seminar

7	4	- Application of METT in evaluating management effectiveness of protected areas	Lecture Seminar
8	4	- Protected areas' network in Mongolia - https://www.youtube.com/watch?v=RlwXqzaunDQ&t=15s	Lecture Video
9	4	- Spatial distribution and representativeness of protected areas in natural regions of Mongolia	Lecture Seminar
10	4	- Governance of protected areas o Definition of governance o Types of governance	Lecture Seminar
11	4	- Sustainable funding o Funding sources o Funding mechanisms	Lecture Seminar
12	4	- Relation of protected areas with sustainable development goals	Lecture Seminar
13	4	- Challenges for protected areas	Lecture Seminar
14	4	- Fieldwork – 1: Developing the management planning for PA	Seminar
15	4	- Fieldwork – 2 : Evaluating the management effectiveness of PA	Seminar
16	4	- Presenting a draft management plan - Presenting reports on evaluating management effectiveness of PA	Seminar

Additional materials for further study can be found at the link:
https://www.iucn.org/theme/protected-areas/about

Course assignments

Course assignments will consist of a multi-part project:

- ~ Assignment #1 – MIRADI application: Short report in class 5
- ~ Assignment #2 – METT application: Short report in class 7

Assignment #1 will entail a more self-organizing activity for the students. Students will recognize MIRADI software, and its application. This will involve conducting desktop surveys, gathering information, analyzing, drafting the management plan and making a presentation. Students will develop and submit at least 6 pages of the draft management plan prior to class 5, and it will be discussed during class 5.

Assignment #2 will entail a more self-organizing activity for the students. Students will recognize the METT, and its application. This will involve conducting desktop surveys, gathering information, analyzing, drafting the management plan and making a presentation. Students will develop and submit at least 6 pages of the draft management plan prior to class 7, and it will be discussed during class 7.

Literature

Compulsory:

1. Oyunchimeg, N., Altansukh, O and *et al* (2019). Evaluating the management effectiveness of protected areas in Mongolia using the management effectiveness tracking tool, *Environmental Management*, Springer, volume 63, No 2, 249-259.). https://doi.org/10.1007/s00267-018-1124-4
2. UNEP-WCMC, IUCN, and NGS (2018). Protected Planet Report 2018. UNEP-WCMC, IUCN, and NGS: Cambridge UK; Gland, Switzerland; and Washington, D.C., USA.
3. G. L. Worboys, M. Lockwood, A. Kothari, S. Feary and I. Pulsford (eds) (2015). Protected Area Governance and Management, ANU Press, Canberra.
4. Ervin, J., N. Sekhran, A. Dinu. S. Gidda, M. Vergeichik, and J. MEE (2010). Protected Areas for the 21st Century: Lessons from UNDP/Gef's Portfolio. New York: United Nations Development Programme and Montreal: Convention on Biological Diversity.

5. Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G (2019). Sustainable Development Report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).
6. Stolton, S. and N. Dudley (2016). METT Handbook: A guide to using the Management Effectiveness Tracking Tool (METT), WWF-UK, Woking

Recommended:

7. Geldmann, J., Coad, L., Barnes, M., Craigie, I.D., Hockings, M., Knights, K., Leverington, F., Cuadros, I.C., Zamora, C., Woodley, S. and Burgess, N.D., 2015. Changes in protected area management effectiveness over time: a global analysis. Biological Conservation, 191, pp.692-699.
8. Barnes M., Craigie I.D., Harrison L., et al. 2016. Wildlife population trends in PAs predicted by national socio-economic metrics and body size. Nature Communications 7, 12747, 1-9.
9. Geldmann, J., Barnes, M., Coad, L., Craigie, I.D., Hockings, M., Burgess, N.D., 2013. Effectiveness of terrestrial protected areas in reducing habitat loss and population declines. Biol. Conserv. 161, 230–238. DOI:10.1016/j.biocon.2013.02.018.