**Adaptive Management: Conservation Project Design and Planning**
**NR 5184**
**Spring 2023 Syllabus**
**7 January 2023 Version**

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Virginia Tech, Center for Leadership in Global Sustainability

1. **Class schedule**
   Please see below for the class schedule. Weekly assignments are generally due on Tuesdays with new materials being posted for the upcoming week generally by Tuesday mid-day. The course PPTs are available on an external website that offers a tutorial for each week's topic and available to you at any time. Students may view in advance or repeat viewings (recommended) as we will run through the first two steps of the Adaptive Management Planning cycle TWICE in this course.

   The course is designed to be asynchronous though it will most likely become helpful to organize conference calls or group chats to clarify course materials, planning processes and more detailed information. I can be available for full class meetings and/or project teams or individuals as needed.

   **2. Faculty:**
   Dr. Heather E. Eves
   Email: heves@vt.edu
   Twitter: @heather_e_eves
   Cell: 703.254.7474

   **3. Office hours and special arrangements**
   Please contact the instructor directly via email to arrange for direct discussion should you have questions that cannot be addressed through the course site or are of an individual nature. It is preferred that you post to our CHAT any questions regarding the course that are or may be relevant to other class participants. My goal is to respond to emails within 24 hours of receiving them. If you do not hear from me in that time period, please feel free to re-send your message. I generally also encourage students to text or call my cell for personal or urgent messaging. I can be available via Text/Whatsapp or Zoom as needed as well.

   **4. Course Summary**
   Faced with limited resources to confront growing challenges, conservation organizations must show that their efforts are strategic, systematic, and results-oriented. This course provides students with the skills and knowledge to collaboratively design and implement effective conservation projects and to generate strategies to evaluate clear evidence of their progress toward achieving conservation and sustainability results. The course provides theory and practice in adaptive management (AM) planning for real-world conservation projects for continued monitoring, implementing, analyzing, learning from, and adapting – offering essential knowledge and skills for current and emerging

conservation practitioners. Students in conservation-focused programs require experiential learning in the practical and applied processes (i.e. adaptive management) and skills (e.g. developing goals and objectives, budget drafting, and teamwork) that are essential for achieving conservation results. In addition this course offers a review of literature on theoretical and applied conservation topics related to conservation project design and planning that provide a history of the formation of the Conservation Standards (CS) as it has evolved and improved conservation practice over the last 20 years.

***Background**:* The purpose of this course is to equip students with the skills necessary for effective adaptive management / conservation planning in the conservation sector. The course is based on the Conservation Measures Partnership's *Open Standards for the Practice of Conservation*, a collaborative effort of major conservation NGOs to standardize the process of adaptive management. The steps outlined in the *Conservation Standards (CS)* provide a framework for planning, monitoring, implementing, analyzing, learning from, and adapting conservation projects. Knowledge of these steps is essential for current and emerging conservation practitioners.

While this process is increasingly being taught to practicing conservationists, adaptive management training is limited in its availability to academic conservation programs. As current and future practitioners, students in conservation-focused programs require experiential learning in the practical and applied processes (*i.e.* adaptive management) and skills (*e.g.* fundraising, budget drafting, and teamwork) that are essential for achieving conservation results.

The course was originally developed by Masters students at the University of Maryland's Sustainable Development and Conservation Biology Program at the request of the World Wildlife Fund. The overall goal was to impart skills, experience and familiarity with the *Conservation Standards* to graduate students intending to enter an applied conservation field. Foundations of Success, a conservation non-profit that specializes in adaptive management training for practitioners, was instrumental in developing the original course structure which was piloted in Spring 2007 at University of Maryland. Since that time the course has been offered by the instructor at Virginia Tech, Johns Hopkins SAIS, St. George's University in Grenada and the College of African Wildlife Management, Mweka, Tanzania. The course has been offered annually at Virginia Tech since Spring 2010 and offered as an online course since 2014.

During this course, students not only learn the theory and concepts behind each step of the *Conservation Standards* but also become familiar with tools that assist them to carry out each step. Students apply these tools in creating a draft management plan for both a case study and an existing or imagined conservation project. Participants in this course work in groups throughout the semester. Our aim is to link theory and practice in an academic setting where students work together as a team to help an existing conservation project with planning and design. This provides students with practical experience addressing real-world conservation problems and working collaboratively to produce draft management plans.

***Overall Goal:*** By the end of the course, participants will understand the process of adaptive management in terms of the Conservation Measures Partnership (CMP) Open Standards for the

Practice of Conservation V 4.0 (2020) (CS) and be able to apply Steps 1 (Conceptualize Project) and 2 (Plan Project, Actions and Monitoring) of the *Open Standards* project management cycle to existing conservation projects. Students will also become proficient using Miradi Adaptive Management Software to document their work and aid in preparing their final project plans.

**5. Learning Objectives**

- Understand the first and second steps of the *Conservation Standards* cycle – "Conceptualize Your Project" and "Plan Your Actions and Monitoring."

- Apply Steps 1 and 2 of the *Conservation Standards* to a real conservation project by preparing the following parts of a strategic plan for that project:

A clear **conceptualization of the project**, including:
-- The definition / identification of project scope, vision and conservation targets.
-- Rating of threats to biodiversity and viability assessment.
-- A situation analysis describing the current situation in the project site, including the factors (direct threats, indirect threats and opportunities) influencing each conservation target, and the causal relationships among these factors.

An **action plan** including:
-- Well-defined goals for all conservation targets.
-- Prioritized strategies identified for key intervention points in the project situation analysis.

-- Results chains / Theory of Change defining core assumptions about how project strategies will contribute to reducing threats and conserving targets.
-- Well-designed objectives linked to key results in a project results chain.
-- Activities required to implement a strategy and achieve objectives.
-- A monitoring plan for measuring the effectiveness and impact of the project.

- Evaluate project design and planning recommendations through critical analysis and peer review.
- Integrate and apply theory of conservation practice with project design and planning such that the participant has the capacity to take on a new conservation project and effectively utilize the *Conservation Standards* and Miradi to plan the first two steps of the project.

1. **Course Structure**

The format of this course is a combination of online tutorials, discussion, and group practice. The curriculum is organized into 14 weekly sessions. Students should read all of the required material related to each step (Conservation Standards, FOS Training Manual, supplemental readings recommended) by the start of each new week or as early as possible in the case of Week 1. The assigned readings provide helpful background and theory to the practical application of conservation planning. Students will be encouraged to engage in group discussions in Canvas of

subject material as it is covered during the course.

Students will work in groups throughout the course to develop a draft management plan for both a case study (where students learn the steps) and a conservation project of the team's choosing by using the provided tools for following the steps and guidelines of the *Conservation Standards*. Following the first six weeks of the course where all students will work on the same case study and produce a draft plan, students will work for a second six weeks on a real-life conservation project that will be determined in the first weeks of the course (either proposed by faculty or projects that students wish to work on from their own professional networks). Our aim is to have the entire class apply the adaptive management process to more than one conservation project so that students get a realistic view of the intricacies of conservation and some useful tools (Miradi Planning Software) and frameworks (Conservation Standards) for moving those particular projects forward. During this course students will work in teams (virtually) with a contact person (ideally a fellow student) of the organization offering the project.

Students will each be required to review written materials and review online tutorials at the start of each week so that you are ready to work on the steps for that week. Faculty will provide the readings and appropriate tools and will work with groups to provide assistance and guidance for applying them to the case study and their specific projects. Each group will provide a summary product adding the results of each week's work at the conclusion of each week (PPT) so that other groups can comment and offer feedback in our Discussion. In addition teams will maintain and prepare their draft management plan using a Google Doc so that feedback can be provided by faculty on a regular basis.

By the end of the sessions, groups will be asked to submit the written adaptive management plan for their projects and offer a summary presentation (PPT) for the class to review.

1. **Grading Criteria**

| **Assignment** | **Points** | **Rubric** |
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| Weekly PPT / Final PPT | 5 pts each / 5 pts 35% of grade | Full Credit: Assignment is complete and all team-members contributed equitably and as agreed*<br>Partial Credit: Assignment is completed but not all team members contributed - full credit only to those who contributed / completed the work<br>*Keep track of / document roles and outputs and agree as a team each week who will do what part of the work. |

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| Draft Management Plan | 40 pts each plan<br><br>40 % of grade | See Above |
| Discussion / Participation | 40 pts<br><br>20% of grade | Full Credit: Meaningful participation each week in Discussion providing feedback to classmates on submitted PPTs / Plans and on Readings / Topic of the week.<br><br>Partial Credit: Meaningful but limited participation in Discussions each week. |
| Certification in CS Steps 1 & 2 | 10 pts (5 pts each step)<br><br>5 % of grade | All participants will take the quiz for Steps 1 and Step 2 for certification in these steps. You can repeat the quiz until you receive a passing score. Certificates will be submitted as proof of completion and for full credit. |

Students will submit a written adaptive management plan for both projects planned which is graded as a draft and will provide PPT presentations/results for their peers to review on a weekly basis and on the final class day. While these components of the course are important results, student participation in class discussions and within group working sessions comprises an equally important portion of individual grades.

Experience suggests there can be one or two individuals on a team who take on an unequal portion of the workload. As a professional community it is my hope that everyone will put forward equivalent effort toward assignments as that is the best way to learn the material and is the optimal way to operate as a member of a team. You are advised to plan the weekly tasks assigned and determine as a team who will be responsible for which part of the assignment and to keep track of this work and agree on the outcomes. If a team member must defer a responsibility that can be arranged within the team assuring that the less active team member takes on larger workload at another time. If a team member must be entirely absent for a weekly set of work please contact me and I can stand in as a surrogate team member.

**PLEASE NOTE**: It is required to receive a grade that you name all digital files according to the following naming convention. If you do not include this naming convention then the assignment will not be graded. **Please do not** submit files with simple names such as: scope and vision powerpoint.ppt – keep in mind that this type of naming doesn't offer the viewer the detail necessary to know what's contained in the file. Let's have sustainable clicking on saved files – It's far more efficient and effective to click on a file knowing exactly what one is about to review.

File Name Guide (team, last names, assignment, date dot doc/ppt/pdf)
**Team _Last Names of Team Members _ Assignment Description_ 20220116. doc/ppt**

**8. Course Text and Resources**
1. Text: *Open Standards for the Practice of Conservation Version 4.0 (2020)*
2. Instructions: *FOS Training Manual: Conceptualizing and Planning Conservation Projects and Programs (2018).*
3. Software Planning Tool: *Miradi* software - all students must register and download this software – there is a small fee ($60) for a full year of software access; a trial access is available for free that can work for 60 days. [NOTE: This price may change - hopefully lower so stay tuned....you can download the free trial version to get started in the course].

4. Download and view this Miradi Tutorial to help guide your understanding of the actual software and how to use it.
4. Weekly Tutorials : Planning for Conservation: Using the Conservation Standards are found on The Nature Conservancy's conservationtraining.org website. You must register to use this free tutorial. These tutorials follow the steps in the Open Standards (#1 above) and guide as to the purpose of and how to develop each step.

**9. Internet resources**
Course materials can be found online on the course website assigned for this course and located at: https://canvas.vt.edu . At the course web site, you may download extra copies of the syllabus, handouts, selected reading materials, and other course related materials. All students should become familiar with and regularly visit the course site and check their VT e-mail (faculty can only communicate through your VT email address) to keep pace with class materials, discussions and assignments.

**10. Virginia Tech Honor Code and Principles of Community**
All students will have been required to sign and submit the Honor Code for registration. The electronic link can be found here: Graduate Honor Code. This code assures that all students support and are supported in an environment of 'academic integrity, fairness and professionalism'.

**11. Course Participation**
Participation in all assignments is vital to your success in the course. Hence, participation in all units is mandatory. As graduate students and professionals, you are trusted to make effective decisions and manage your time efficiently. This is an opportunity for students to work and learn together, and share their perspectives. Presence and active participation in our virtual classroom is important for successful completion of the course.

If you must miss a course assignment deadline or scheduled meeting, please notify the instructor and your group in advance. An email stating justification prior to the assignment deadline is adequate notice of last minute emergencies.

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**Emergency Information and Support**
You may contact the instructor via email or mobile phone in the event of a last-minute personal situation that requires you to miss assignments.

If you need course adaptations or accommodations because of a disability or special need, you should discuss them with the instructor ASAP. Please, do not wait until later in the semester. In all cases, please feel free to contact the instructor should you have any questions.

**13. Course Improvement**
This course has been taught at Virginia Tech in an online format since 2014 (it has been taught at VT since 2010). We seek ways to improve this course and value your suggestions and recommendations. At any point during the course, your comments are most welcome.

**14: General Schedule**
Below is a general schedule for the semester. More detailed assignment information will be provided in the course site each week. The course has been designed such that you will go through each part of the first two steps of the planning cycle offered in this course - TWICE. During the first session you will all work on the same case study and work in groups using the online tutorials as guidance/lecture and provided free by The Nature Conservancy. This way groups can assist each other by working on the same project and learning the planning process itself as a primary focus. For the second part of the semester each group will work on a real-world conservation project and repeat the planning process learned in the case study. Having offered this course over several institutions since 2007 it has become clear that it is difficult to learn this material going through it one time only and students benefit greatly from repeating the learning and using the online tutorial.

| **Date** | **Topic** | **Assignment** |
|---|---|---|
| | **Session I: CASE STUDY** | |
| Week 1: | Introduction to Adaptive Management | Submit BIO in Discussion Forum<br><br>**DUE 20 JANUARY**<br><br>Review Open Standards, Skim FOS Training Manual, Download Miradi and Watch Miradi Tutorial, Register and Sign Up for Open Standards Tutorials, |

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| | | Submit BIO in Discussion Forum<br><br>**Due: 24 January** |
| Week 2: | Project Team, Scope and Vision | PPT: Scope and Vision<br><br>**Due 31 January** |
| Week 3: | Conservation Targets and Viability Assessments | PPT: Targets and Viability Assessment<br><br>**Due 7 February** |
| Week 4: | Rating Critical Threats and Situation Analysis (Conceptual Models) | PPT: Threat Rating and Concept Model<br><br>**Due 14 February** |
| Week 5: | Goals & Strategies | PPT: Goals and Strategies<br><br>**Due 21 February** |
| Week 6: | Assumptions, Results Chains and Objectives | PPT: Results Chain (for One Strategy) and Objectives<br><br>**Due 28 February** |
| **Spring Break** | **March 4 - 12** | |
| Week 7: | Actions and Monitoring | Final PPT & Report including Actions and Monitoring Plan<br><br>**DUE 14 March** |
| | **Session II: TEAM PROJECTS** | |
| Week 8: | Intro, Team, Scope and Vision | PPT Scope and Vision<br><br>**Due 21 March** |
| Week 9: | Targets and Viability Assessment | PPT Targets and VA<br><br>**Due 28 March** |
| Week 10: | Threat Rating and Situation Analysis (Conceptual Models) | PPT Threat Rating and Concept Model<br><br>**Due 4 April** |

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| Week 11: | Goals & Strategies | PPT Goals and Strategies<br><br>**Due: 11 April** |
| Week 12: | Assumptions, Results Chains and Objectives | PPT Assumptions and Results Chain (One Strategy Only) & Objectives<br><br>**Due 18 April** |
| Week 13: | Actions and Monitoring | Final PPT & Summary Report with Actions/ Monitoring<br><br>**Due 25 April** |
| Week 14: | FINAL REPORTS | Final Reports Editing and Submission<br><br>**Due 2 May** |