**BIOL 416 Terrestrial Ecosystems U.N. SDG #15 Group Seminar assignment**

**The 3 most relevant course learning outcomes related to this exercise are that by the end of the course the student should be able to:**

1. Discuss and critique United Nations Sustainability Development Goal #15 (Life on Land) and explain the scientific rationales underlying each of its nine specific targets.
2. Formulate clear, original, challenging, and concise thematic questions from study reading material that are likely to lead to focussed and intellectually probing seminar group discussions, student-led seminar topics, and short media presentations
3. Present a stimulating, informative and creative seminar on the scientific rationale, current progress, and suggested improvements for one of the nine specific targets within United Nations Sustainability Development Goal #15 (Life on Land)

This exercise is aimed at familiarizing you with how to access, synthesize and present both general and primary scientific information on one of the nine specific targets of the United Nations Development Goal #15 (Life on Land). Working in groups (2-3 people), you will prepare and deliver a seminar introducing the chosen UN SDG 15 target, and then focusing in on some aspect of that target that particularly interests your group.

The most critical part of the whole exercise, and the key to a successful seminar, is to identify a clear and specific focus question that you and your partner(s) would like to address. You will need to be creative and think carefully about your focus question. **Ask yourself, what is the most interesting question you can ask in relation to your chosen UN SDG 15 target.** Seminar questions should be constructed so that they will lead to focused, intelligent discussion that will move the seminar convenors and the audience toward some potential answer, or toward a more refined perspective on the issue/theme, or toward an even more refined question. Expect to make several iterations of your seminar question as you read about the topic and develop your thinking and understanding of the issue involved. In many ways, formulating a good, clear, concise, challenging and original question is the most difficult part of the whole exercise, but it is also the most interesting and creative part, and once achieved, should make for a very effective seminar. As you prepare, I am happy to meet with each group to help you refine your question. Please allow plenty of time (e.g. a week) for this part of the exercise.

Your ultimate goal as seminar convenors is to excite interest in the topic of your chosen UN SDG 15 target so that your audience will be fully engaged and keen to discuss ideas you raise, and therefore that they will leave the seminar afterwards with a much better understanding of the specific seminar question you have focused on, and how it relates to the UN SDG 15 target you have chosen.

**Learning Objectives:**

1. Consult the general literature and devise an original and challenging seminar question that addresses some aspect of your chosen UN SDG 15 target.

2. Search the primary scientific literature for a significant example, 'case study', review, or conceptual framework of research in terrestrial ecosystem ecology related to that UN SDG 15 target.

3. Identify and evaluate the unique contribution of that terrestrial ecosystem ecology research to addressing your seminar focus question.

4. Critically assess that terrestrial ecosystem ecology research (positive and negative aspects).

5. Interpret the study’s conclusions in the broader context of understanding the chosen UN SDG 15 target.

6. Develop oral presentation skills, particularly discussion leadership.

**Seminar Exercise:**

Consult the scientific literature and synthesize the current status of your chosen UN SDG 15 target so that you can formulate an interesting and original seminar focus question. You may find the resources posted on the course web page References list (and the citations in those papers) useful as a starting point in reviewing the UN SDG 15 literature. Formulate the wording of your focus question so that you can use your literature research and seminar to make some progress toward answering it. Search the primary literature (i.e. sources that present original research data) for a relevant terrestrial ecosystem ecology paper that you will use as an example or ‘case study’ or review or conceptual framework to address that issue. Note that your seminar question should have a much broader focus than the individual paper. In other words, the paper will not provide a comprehensive answer to your question, but will contribute to moving us toward an answer. You are encouraged to use evidence from other readings to supplement the seminar paper.

Make an oral presentation (that would total no more than 12 minutes for a conventional uninterrupted ‘talk’, but that will actually last much longer because it will be deliberately designed to invite multiple question and answer and discussion sections), aimed at stimulating ideas and debate. One useful strategy to achieve the interactive discussion is to structure your presentation with not just the main focus question but with 2-3 well thought-out probing sub-questions interspersed through the seminar. The whole presentation should be suitable for an interested public audience, and MAY include the following headings (which should be divided among seminar group members):

1. Introduction to the chosen UN SDG 15 target:
   1. What is the broad issue addressed by the chosen UN SDG 15 target?
   2. What is its historical context?
   3. Having supplied the above background introduction, present your seminar question - Make sure to write it up very clearly in your title page, and possibly again later. Explain why you chose that particular question.
2. The scientific rationale underlying the chosen target: (e.g. for 15.1 What scientific evidence underlies the proposition that forest area is important for conserving the biological integrity of forest ecosystems?).
   1. What specific links can you make from the target’s proposition to the material delivered in the textbook-based seminars during the first half of the course?
   2. Research paper results: Present a brief summary of those study results that are most relevant to addressing your seminar focus question (e.g. perhaps 1-3 of the core graphs or tables – no more). Remember that your audience have already read the paper, and that your available time is short – keep this section concise and very centered on your seminar focus question.
   3. Critical assessment of the study's main results and conclusions that are relevant to your seminar question. Think like a scientist – What are the strengths and weaknesses of the study (i.e. positive and negative aspects), and what are the critical assumptions underlying the study’s data collection and/or data interpretation?
   4. What insights does your chosen terrestrial ecosystem ecology paper provide to understanding the rationale for the SDG #15 target?
3. Target implementation progress:
   1. What on-the-ground terrestrial ecosystem ecology-based activities are being used to achieve the target?
   2. What is the current state of progress for each of the specific indicators associated with the chosen UN SDG 15 target?
   3. What mechanisms are being used to make those indicator measurements, and what are the principal constraints on progress?
4. Critique the UN SDG 15 target: Its wording, its indicators, and its implementation.
   1. Based on your knowledge of terrestrial ecosystem ecology, what science-based improvements would you suggest?
   2. Any broader suggestions for improvements?
5. Conclusions: Finish your seminar by summarizing your conclusions on the focus question you have posed. Be sure to include a synopsis of what you have learnt from your seminar audience as well. Providing a set of 2-3 ‘take home’ messages summarizing the above is particularly effective. Finally, offer some evaluation of the study's contribution to advancing our understanding of UN SDG #15.

**Seminar convenors:**

Note that the main objective of this exercise is the process of synthesizing information on an issue, and critically evaluating a primary research source from the scientific literature. You are not expected to understand (or present) the fine detail of the results and data analyses from your chosen primary research paper. Concentrate on the main points and big issues that are most relevant to your seminar focus question. Use the **research** **paper as a spring-board to help you address your seminar focus question**. The more interactive and discussion-based the seminar is, the better. As suggested above, one great way of promoting the latter is to develop and present 2-3 carefully thought-out sub-questions within the seminar, that you can put to the audience to initiate interesting, probing, deep discussion.

Seminar convenors will be graded as a group (50% of the total mark) according to the following criteria:

i) **quality of the seminar question** – clarity, focus, intellectually stimulating, creativity

ii) **development of that question** during the seminar using evidence from the chosen reading, and other sources

iii) **presentation structure and clarity**

iv) **synopsis** at the end of the seminar

Seminar convenors will be graded individually (50% of the total mark) on each of their presentations according to the following criteria:

v) **evidence of independent critical thinking and original ideas** (e.g. identifying the study's main results and conclusions that are relevant to your seminar question; critiquing those results and conclusions; relating them to your seminar focus question)

vi) **enthusiasm and originality in presentation**

vi) **audience engagement and discussion leadership**

Note the above very carefully - They tell you what I am looking for!

The overall question and possible readings that you are considering using for your seminar should be sent to me in time (at least 10 days prior to your seminar) so that we can schedule a meeting with each group where I can assess the question and the possible papers and provide feedback. The earlier you send them to me, the more feedback I will be able to provide. If you are having difficulties, please contact me. Finally, note that I am very keen to support individual approaches in this course, so if you have other suggestions of how you would like to do your seminar (e.g. role plays, debate, mind maps, infographics, artwork [as long as it acts as a synopsis] …), please contact me for support/assistance.

**Seminar participants:**

The success of this course as a learning instrument will largely depend on the quality of the discussions in each seminar. The main objective is to encourage the thinking processes of understanding, assessing, and critiquing U.N. SDG #15 in the context of the underlying terrestrial ecosystem ecological science. Initiation and participation in the discussions during each seminar is a critically important part of the learning process in this course. Please read the research paper circulated prior to each seminar, and submit a single discussion idea or question relating to the chosen SDG #15 target, or to the chosen research paper, or some combination of the two. For assistance, please consult the separate document entitled Guidelines for developing good seminar questions posted on the webpage and onQ. Your question should be submitted in Microsoft Word format to the convenors **before** the associated seminar begins – late questions will not be accepted. The questions will subsequently be graded by the convenors and the course instructor on the basis of their quality (i.e. perceptiveness/depth of thinking, originality, and relevance).

**Final task for the seminar convenors:**

After you have both given your seminar, you will have 1 week to mark the audience’s written questions.  I will circulate a spreadsheet in which you can enter the marks (out of 10) and then send to me.  Remember that the questions must have been submitted prior to the seminar, and should be marked on the basis of their quality (i.e. perceptiveness/depth of thinking, originality, and relevance).

In addition to learning how to assess and grade each other’s work, the second goal of this task is for you to learn from the ideas and questions your audience have provided to you.  Accordingly, please reflect on each of the question submissions, and write in any useful comments or responses that you think the questioner will benefit from (as ‘comments’ in the Review tab).

Finally, please consult with each other and agree your choice of the best two questions out of all the ones you got...and indicate your selection (1st, 2nd) on the marks spreadsheet when you send the questions all back to me – within a week of your seminar please.

**Key tasks and associated assessments:**

* Pick seminar partners and topics **fairly soon** (first come, first served)
* Seminar Presentation on your day (25% of final mark)
* Seminar Questions (by seminar attendees). **Send to convenors** **before** each seminar(each question contributes to 20% of final mark)
* Graded Seminar Questions **(by seminar conveners)** due ONE WEEK after your seminar