

**ENVS 42**  
**FOREIGN STUDIES IN ENVIRONMENTAL PROBLEMS II. SOCIAL AND**  
**POLITICAL ASPECTS OF DEVELOPMENT AND CONSERVATION IN**  
**SOUTHERN AFRICA**

Prof. Doug Bolger and Michael Cox - 2018

**please READ and REREAD this syllabus throughout the term**

This course gives you the opportunity to engage in a term-long research process that involves both your own empirical observations and the academic literature. The two products of this research are a research journal and an annotated bibliography. You will choose a relevant research topic of personal interest before the term begins and will prepare beforehand by gathering articles and information about your topic. During the term you will make observations, talk to people and read and write about your topic. You will develop expertise in that area and be a resource to the group. It will give you one particular lens through which to view southern Africa. You will choose a more narrow area within the topic to pursue through the academic literature and an academic framework. These will be represented in your research journal and annotated bibliography.

You will need to find in the literature some type of academic theory or framework that will serve as an analytical tool for you to illuminate some part of the broader topic in greater depth and complexity. This type of intellectual tool will allow you to go beyond a mere description of your topic. An analytical tool enables you to subdivide your topic (analyze means to dissect), to draw finer distinctions, to see hidden similarities and differences among cases. It can illuminate cause and effect relationships that are not readily apparent. It can give the researcher the ability to notice things that previously were invisible to her (but be aware, it can also obscure other things).

Your engagement with your ENVS42 research topic should span the entire term and all the activities of the FSP. *In other words, this topic should be one of the lenses through which you view southern Africa.* You should conduct primary research as part of this focus. At each location we visit and with each person you meet you should think about what you can learn about your topic. To help you keep this continuing focus you will keep a **research journal** to take notes, conduct interviews, and record your thoughts and evolving understanding of your research topic. Your other primary product will be an **annotated bibliography**. The annotated bibliography will capture your synthesis of ideas from the academic literature with your personal research topic.

The journal and the bibliography are the two primary products of your research - *you will not prepare a paper at the end of this research project. The circumstances of the FSP do not lend themselves to paper writing. So think of the journal and the bibliography as alternative ways of capturing and expressing the fruits of your research.*

The primary learning objectives for this class:

1. Engage in a longer-term research process (at least longer term than the typical process for a Dartmouth research paper).
2. Gain expertise in a particular area of the conservation-development nexus.

3. Experience grappling with the juxtaposition of the more local and subjective empirical knowledge you acquire through direct observation and the more general, theoretical and broad empiricism of the literature.
4. Gain an understanding of research as an iterative process (think, observe, read, write, re-think, observe, read, write, re-think, etc.)
5. Experience applying an academic theory or framework to your own observations
6. Experience recording thoughts and observations in a journal and being able to retrospectively observe how your ideas develop and evolve.
7. Struggle with how to choose the correct level of focus for research.

**Challenges you will face with this type of research.** *These are all essential dimensions of the research process. These challenges are intrinsic to research and are inescapable and thus need to be accepted rather than resisted; otherwise, they lead to a lot of frustration and wheel-spinning:*

1. Choosing the correct breadth for a research project is difficult
  - a. Your topic must be broad enough to engage your interest through much of the term.
  - b. The subject of your annotated bibliography must be narrow enough to use the academic literature to illuminate some of the depth and complexity of the topic. Thus it will encompass only a subset of your broader research topic
2. Your topic usually will not be tangibly represented at each site we visit. (e.g. you might be interested in agriculture – sometimes we will be at, or near farms, other times we won't). This is OK, you can always talk about your topic with the people present, read articles about it, think about it, and write in your journal about it.
3. Your topic will evolve and change as you learn more about your topic. This is the creativity and discovery that is inherent to research. You can't know where your research will take you until you arrive there. Trying to think your way all the way to some optimal endpoint will lead to procrastination. **You must work the research process and accept there will be dead-ends and changes of direction.**
4. Good ideas often take time. A satisfactory thesis will only emerge after a long period of talking, thinking, writing and reading about your topic.
5. To succeed (and enjoy) this you'll need to embrace the research process from the beginning, rather than putting off until near the deadline the difficult choices of how to focus (as is often more typical of an on-campus research process).
6. This is a complex and open-ended process. We cannot fully prescribe it for you and tell you exactly what to do and how to do it. You must take responsibility for engaging in the research process and following it to a satisfactory conclusion. Be sure to ask questions and solicit feedback, but ultimately you must be willing to do the hard intellectual and creative work of research.

The deliverables for this course are listed below with the approximate percentage contribution to the final grade.

	<b>Course Requirements</b>	<b>Points</b>
	Participation	10
	Annotated Bibliography	40
	Research Journal	50
	<b>Total points</b>	<b>100</b>

**Time Management:** The tasks of ENVS42 need to be worked on all through the term, including the time in South Africa and Namibia. So you will have to find a way to fit it in alongside the other activities of the FSP. On the detailed daily schedule you will receive when you arrive in Africa it lists when internet will be available. Look at this and plan ahead for any internet based research you need to do.

## **SCHEDULE**

**Summer. In consultation with Doug choose topic and do initial research.**

**September 12-16. Johannesburg and Soweto**

**September 17-26. Matatiele**

**September 26 -29. Wakkerstroom**

**September 27:** Submit ENVS 42 journals to Clare

**September 28:** Discuss ENVS 42 journal with Clare

**September 29-October 6. The Wits Rural Facility (WRF)**

**September 30:** Submit first draft annotation electronically to Clare and Doug

**October 6-13. Timbavati private game**

**October 14: Fly to Namibia**

**October 15:** Submit second draft annotation and journal to Doug

**October 14-18: Windhoek.** Last best chance for prolonged internet access before 42 ends. Plan accordingly.

**October 18-20: Cheetah Conservation Fund.** Predator-focused conservation NGO.

**October 20-22: Etosha National Park.** National park management

**October 22-24: Windpoort Farm.** Livestock farming and game farming

**October 24-27: Twyfelfontein Conservancy.** Communal conservancy.

**October 27-29: Swakopmund.** Coastal resort town. Finish Journal and Annotated bibliography. Submit to Doug before we leave for Gobabeb on the morning of the 29<sup>th</sup>.

**Assessment:** Verbal and written feedback will be provided on the individual components along the way but no letter grades are given until a final grade is assigned based on the entire body of work. *In general, work that is deeper, more complex and more successfully struggles with the synthesis of observation and theory will receive higher grades.*

## GUIDELINES FOR EACH COMPONENT OF THE TERM PROJECT

### 1. Choosing a research topic

Before the term you will choose a more narrow topic within the broad umbrella of “Development and Conservation” as your research focus. The relationship between conservation and development is one of the main themes of the Africa FSP and many of our activities and readings address this topic. Many of you have been exposed to the Conservation/Development nexus through ENV39 or similar courses. However, if you are unsure about the meaning of the term you can talk to me about it.

To generate potential topics to consider you should browse the FSP PDF library for ideas. (The PDF library is a searchable database (Mendeley) of articles and is on all the program computers and ipads). You can also look at the attached list of sites we will visit and the themes you will engage with at each site.

Example research topics:

- Wildlife disease/relationship to livestock and human disease
- Land restitution and conservation lands
- Ecological effects of livestock fencing
- Role of traditional leadership in conservation and development
- Game farming
- Ecological effects of cattle ranching
- Landuse conflicts: wildlife conservation versus mining, rural development, agriculture, etc.
- Rural energy
- Wildlife’s role in rural food security
- Conflicts over water for wildlife versus people (agriculture, mining, etc.)
- Ecological impact of waterpoints and boreholes
- Differing approaches to conservation: “fortress” conservation, co-management, local control, etc.
- Economics of wildlife conservation
- Economics and policy of poaching (ivory ban)
- Gender and conservation
- Big game hunting and conservation
- Colonial/Apartheid legacies related to land and conservation
- Effects of firewood harvest on biodiversity
- Effects of the focus on charismatic species (“Big Five”)
- Differences between SA and Namibia in conservation management.
- Sustainability of medicinal plant harvest
- Invasive species
- Mining

**Initial Statement of Research Focus.** You should compose a paragraph (in electronic form) that describes your research focus. This should be short, 4-8 sentences will suffice. It should capture the state of your knowledge of the subject area and a sentence or two of why you have chosen this topic. We don’t expect a great depth of knowledge at this point in your research progress, but this paragraph will record your starting point for your research and

commit you to this research topic. To the extent you can, suggest possible ways to further narrow the topic for the annotated bibliography. Are there any academic frameworks that might be useful?

I will send back brief feedback on each topic including suggesting an article or two to help you begin your research. We fully expect that your research topic will continue to evolve over the course of the term. In fact, this is one of the characteristics of research and a term-long research project has the benefit of allowing for this type of intellectual development.

## 2. Guidelines for Research Journal

The researcher diary can be seen as an integral part of the development of the researcher and the construction of research knowledge. In the same way that diary writing and reflection act as mediators in the development of teaching, researcher diaries mediate the construction of research knowledge. I strongly believe that my experience of keeping a research diary scaffolded my development in several ways. One was as a repository for thoughts and reflections; another was as a written account of my research journey. Not only was the act of writing scaffolding my knowledge through inner dialogue with more expert other, but the opportunity to re-read and interact with my thoughts was also a strong mediator in understanding my role of researcher and the research process.

Engin  
2011

When you arrive in South Africa, Professor Cox will give you a bound blank journal to use as your research journal. **You should make regular dated entries into this journal, at least three times per week.** (Don't hesitate to fill this one up and start on a second.) Your journal entries should capture all components of your research process. You can record here your thoughts, notes on interviews or conversations, notes on your reading, etc. (**put reading notes in here, but not your annotations – they go in an electronic document – see below**). In your journal entries you should try to capture the evolution of your conception of your research topic. **Entries in this journal should only address your research topic, do not put other FSP notes here.**

In addition to those entries, once per week (choose one day of the week to do this and stick to it) briefly and thoughtfully answer these three questions. What did I do in the last week to move my research forward? What changes have occurred in my thinking about the topic? What plans do I have to keep my research progressing in the immediate future? (no need to repeat the questions. Just label the entry as “weekly questions” and simply label your answers (1) (2) (3).

Entries will be of two general types: descriptive and reflective.

Descriptive: Notes on reading, interviews or observations. Data. Sketches. Factual accounts of places you went, things you saw, people you spoke to, articles you read. TO DO lists. Notes on literature searches, keywords.

Reflective: “Thought” pieces about your evolving understanding of the topic. Critical analysis of an article. “Brainstorming” notes or diagrams. Strategic plans for moving the research forward. Questions you want to answer. Discourse on how you feel about your research.

Obviously, these are not mutually exclusive categories and both are important to the research process. **However, the reflective components add the most to the depth of the research. A lot of descriptive material without sufficient reflective processing won't take you far. So be sure to devote plenty of space and attention to the reflective components.** Keep in mind this quote from Rapely (2007):

Writing is thinking. It is natural to believe that you need to be clear in your mind what you are trying to express first before you can write it down. However, most of the time the opposite is true. You may think you have a clear idea, but it is only when you write it down that you can be certain that you do. (p.25)

Use the journal as a thinking tool. In some of your entries take the time to try to express the kernel of your research topic clearly and concisely. This will help clarify your thinking and this clarity will help move the research forward. In the past we have seen a strong correlation in the seriousness of the use of the journal and the quality of the resulting bibliography.

This is a journal/diary so the point is to use it frequently (i.e. you should be thinking about your research frequently so you should need to make journal entries frequently). **If you find you are always behind and have to catch up more than a couple of days with your journal you are missing the point and the value of the journal and will need to adjust your work flow so that you can make more regular entries.** Try to keep the journal handy and jot things down as they come up. The entries don't have to be long – although some of them should reflect longer reflections too. **Don't just fill up the journal with writing to satisfy the assignment. Instead, experiment with research journaling as a research and thinking tool. What kind of entries best help you advance the depth of your understanding of your topic?**

**If you feel the need for more guidance or inspiration for the research journal read the article by Engin in the Mendeley library.** And keep in mind the value of a research journal as expressed by Borg (2001):

Simon Borg 171

1. *It served as a reminder of past ideas and events which guided subsequent action.* The journal provided a database from which precise information could be retrieved at a later date. I often went back and re-read earlier entries as a means of reminding myself what I had done at an earlier stage of the study and using this information as the basis for subsequent action.
2. *It provided a record of plans and achievements which facilitated evaluation.* The journal documented both plans and actual achievements throughout the research process. This written record facilitated my task of evaluating progress and, in the case of lack of progress, of reviewing possible reasons for it.
3. *It supplied an account of events and procedures which allowed a more detailed write up of the study.* A record of specific information about events and procedures during the fieldwork and in analysing the data was particularly useful when I wrote up the study because it enabled me to fill in what would have otherwise been gaps in my description of what I had done.
4. *The journal allowed me to recall and to reproduce the thinking behind key decisions in my work.* The detailed record of experiences captured in the research journal was a powerful form of data which I drew on in my thesis to convey to readers how specific decisions were made, particular problems overcome, or specific events perceived.
5. *The research journal comprised an instructive narrative of my professional growth.* The journal provided a detailed account of my changing perspectives on the research process throughout the project. Reading through it, as I did at various stages along the way, and as I still occasionally do, is a source of instructive insight into the development of my understandings of the research process.
6. *The journal provided physical evidence of progress which gave me a sense of achievement and motivated me.* Blaxter, Hughes and Tight (1996: 49) write that as the research journal (or diary, as they call it) grows, 'it will serve as a physical (but hopefully not too embarrassing) reminder of just how far you have progressed'. My experience supports this assertion. In regularly reviewing my journal, I found that the mere activity of reading through it and acknowledging the work I was doing was motivating.

**To help organize your journals, please date each entry.** Also, in some way demarcate each entry (e.g. leave sufficient space in between them or draw a line to separate them). Also, please label each entry using a descriptive label in a box:

For example:

Reflection

Weekly Questions

Reading notes on Jones et al. 1999

Thesis ideas

Random thoughts

Reflections on Jones et al. 1999

Observations at xxxx

Interview with xxxx

Discussion with xxxx

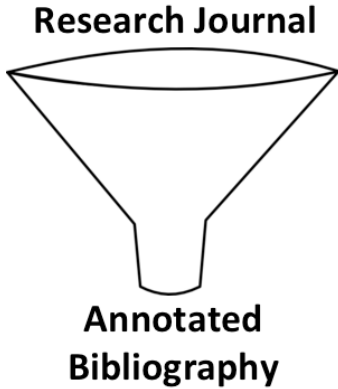
### 3. Guidelines for Annotated Bibliography

Researchers use annotated bibliographies to identify and abstract an academic discourse, school of thought, or specific topical area. An annotated bibliography can assist a researcher in identifying gaps, weaknesses, contradictions, or unresolved controversies in the literature under review. These can then be used as the basis for theses for further research. This part of the course asks you to undertake an annotated bibliography of important literature for your research focus.

#### Annotations:

1. Five annotations are required
2. To achieve a satisfactory degree of depth and complexity through only 5 annotations will require a relatively tight focus. Choose your source material carefully. Make sure that it is directly relevant and helps move your research forward.
3. Each annotation should clearly, concisely and critically convey the main points of the source material. However, it is not merely a “book report”, you need to evaluate and not just summarize the material. Your annotation should demonstrate your “intellectual ownership” of the material; convey its’ significance in your own words – don’t merely paraphrase the abstract. Strive to convey specific information from the source in your annotation. (see examples). Be sure to take the time to understand the article thoroughly and integrate them thoughtfully with your research thesis and your personal observations.
4. While the article should be the main focus of the annotation you should include your own ideas and observations where appropriate. (see examples)
5. Each annotation should be around 400-500 words, although slightly longer entries are acceptable as long as they are written concisely.
6. While conducting your research for the annotated bibliography, you should also be developing your own “point of view” or thesis about your research focus. This will enable you to assemble and synthesize your source material in an original way. It will also help guide your further research by allowing you to home in on the most relevant source material. Your annotations should reflect this developing perspective. You will surely need to go back and revise your annotations as your ideas evolve – that is part of the process.
7. All five annotations should be submitted in a single document in **electronic form** in MS Word. Be sure you make a backup copy of your document (preferably on your own flashdrive) each time you modify it. Put your name in the title of the document
8. **Thesis statement.** The document that contains your five annotations should begin with a one-paragraph thesis statement. This statement should evolve through time as your understanding and conception of your topic changes. This statement should contain a **maximum of 350 words**, and should concisely and specifically describe the ideas that unite these five articles and your associated thoughts and observations. The paragraph should refer to each annotation with a number, (1)-(5), and explain how each fits and supports the thesis.
9. Revise the annotations as needed to better serve the thesis

**What goes in the Annotated Bibliography versus the Research Journal.** A funnel is a commonly used metaphor for the research process. The broad mouth of the funnel



represents the full breadth of a researcher's interests in a topic. However, there is a necessary tradeoff between breadth and depth. So to achieve the depth and complexity necessary in original research requires the researcher to focus her research activities more narrowly. In this course, use the research journal to record the full range of your interest and the varied ways in which your topic plays out in the different sites we visit. But in the annotated bibliography you should take on a narrow subset of the broader topic. This will allow you to address that subtopic in more depth, complexity and originality. This focus should develop through the term to the point where you can express it succinctly as a thesis statement.

#### How to locate source material.

There are over 2000 articles in the Mendeley database available on the course ipads and macbooks. Thoroughly investigate these local resources before turning to web-based resources. For additional literature you will need to access the Dartmouth library resources via the internet using the course computers and ipads or other computers when we are in locations with internet access. **Since we will often not have internet, you will have to be strategic about ensuring that you do your library research when internet access is available. At the start of the term you'll be given a calendar that lists when internet will be available.**

I recommend a proper search engine like Web of Science (**note:** Google Scholar is useful for quickly accessing some things, but it is not a good academic search engine that will allow you to thoroughly search the literature.)

Format to use for the references in your bibliography. For simplicity, I would like you to use the APA format. You can find detailed instructions for this on this website (<http://www.dianahacker.com/resdoc/manual.html>). For instructions on how to reference different kinds of source material see the section "APA list of references" that is under the "Social Sciences/Documenting Sources" pull down menu. *A web archive of this page is available in the "dropbox" folder on each computer so that you can consult this even if you don't have internet access.* I've provided an example of the journal article format below.

Here is an example of the reference style for a Journal article. See the archive for other kinds of sources:

Ungar, M., Brown, M., Liebenberg, L., Othman, R., Kwong, W. M., Armstrong, M., & Gilgun, J. (2007). Unique pathways to resilience across cultures. *Adolescence, 42*, 287-310.



## **Examples of how past students defined their research projects:**

Background: ENVS

Initial interest: Sense of place of rural communities

Academic framework: Psychological theories of attachment formation

Thesis: A deeper understanding of the multiple psychological dimensions of attachment formation would enable conservation participants to better manage conflict in multi-stakeholder conservation efforts.

### Excerpts from annotations:

According to the authors, place attachment has its roots in place meanings, which tie a person to the place and its natural resources. Place attachment has two components: place dependence, a functional attachment based in the physical resources provided by the place that are necessary for certain activities to occur, and place identity, an emotional and psychological attachment to a setting that develops over time from the symbolic meaning of the place.

The authors hypothesized that place identity mediates the relationship between place dependence and environmentally responsible behavior

he found that 49% of residents largely cited social characteristics to define their sense of place, 21% relied environmental characteristics, and 30% reported a blend of characteristics.

The development of a more complex place attachment over time is an important consideration for conservation managers, particularly in Southern Africa, where management has a history of extra-local actors and fortress conservation. Often, managers have a relatively shorter time-relationship with a place than do the local people. This could mean that these managers have a more simplistic relationship with a place, defining it solely by its environmental resources rather than its social context

In Phinda, for example, the local people are completely excluded from AndBeyond's management decisions within the park, even though they successfully passed a land claim. With no ongoing relationship with the conservation area, it is likely that local people have a lesser sense of place dependence, which reduces place identity, an integral part of a person's sense of self, community, and general wellbeing (Vaske and Kobrin 2001). This reduction in place identity also has the potential to reduce ERBs, which could mean the proliferation of environmental degradation through activities like poaching or illegal harvesting of resources (Vaske and Kobrin 2001).

Background: Engineering

Initial interest: environmental effects of infrastructure

Broad topic: effect of transportation infrastructure on wildlife

Academic framework: trophic cascade theory

Thesis: Transportation infrastructure leads to trophic downgrading in Southern Africa's grassland/savanna ecosystem.

Excerpts from annotations:

I became increasingly convinced that more cryptic wildlife dynamics and responses were at play than merely the direct effects (such as mortality from collisions) that many researchers had focused their efforts and analysis on, but it was difficult to pinpoint just what. That was until I read this review by James Estes et al., which has clarified to me that those indirect effects I had in mind are actually significant...these interactions have effects that are vastly more profound than just the decline of one population from road mortalities. The authors present a concept called "trophic downgrading" by which the alterations of size or distribution of certain species can have dramatic effects on ecosystem health

They point out that indirect effects may be more significant and more rapid than direct effects, and that clarification of the effects from roads is needed given claims that transportation infrastructure is one of the main drivers of biodiversity loss.

For the second time I have chosen to look at a study which deals with elk populations partially out of a lack of Southern African studies, and partly because elk may exhibit behaviors and ecosystem function similar to kudu, nyala and other large antelope.

## Example Annotations:

Read these illustrative annotation examples from previous students. Pay particular attention to how these students demonstrate “*intellectual ownership*” by expressing the article’s ideas in their own words. You have the impression that it is the student speaking to you, rather than the author of the article. Also, notice how they place the specifics of the article into the larger context of their own emerging research thesis and connect the articles to their own observations in southern Africa.

Vetter, S. (2005) Rangelands at equilibrium and non-equilibrium: recent developments in the debate. *Journal of Arid Environments*, 62, 321-341.

In my research I have questioned the use of fixed stocking rates for cattle management. I felt that such static population numbers are not based in natural system cycling, but I had nothing to support my claims until I read this paper by Vetter. Hers was the first to provide a useful theoretical framework that weighs the pros, cons, and general applicability of stocking rate-based cattle management.

Vetter contends that there are two different ecological paradigms in grazing management: equilibrium models and non-equilibrium models. Equilibrium models stress biotic feedback loops, such as how cattle density affects vegetation productivity, which subsequently affects cattle density. This paradigm encourages the use of rangelands assessments to establish a fixed stocking-rate. Non-equilibrium models, on the other hand, claim that variable abiotic factors such as rainfall variation better explain rangeland productivity. This paradigm thus encourages the use of opportunistic stocking rates to increase cattle density to take advantage of wet years and lower cattle density during dry years.

Vetter contends that most rangelands fall in a spectrum between the aforementioned models. Rangelands that have consistent rainfall and steady-resource bases follow equilibrium model more closely, while rangelands with inconsistent rainfall and highly variable productivity follow non-equilibrium models more closely, yet all rangelands have elements of both models.

Commercial cattle-owners generally manage their land more according to equilibrium theory and communal owners generally follow practices based on non-equilibrium theory. But there is extensive overlap in their practices, especially in their responses to droughts. I have found academics and commercial owners are quick to criticize communal cattle management, claiming communities degrade their rangelands. But I have yet to find convincing data that supports this stereotype. Such a stereotype assumes most communal rangelands operate under equilibrium conditions, which may not be the case. On the contrary, I would argue that because of the Apartheid, black communities were relegated to poor rangeland, with more variable rainfall and productivity. The most consistent grazing lands were reserved for commercial white farmers. As such communal grazing occurs more in rangelands that more closely follow non-equilibrium theory, while commercial rangeland follows equilibrium theory more. Thus, fixed stocking rates may be better on South Africa’s commercial land, whereas opportunistic stocking strategies may better fit communal lands.

Namibia has the opposite phenomenon as South Africa as the most consistent rangeland is communally owned land in the north, and the least productive land is managed commercially in the south. Thus, I would argue that land ownership in South Africa is, compared to Namibia, is better allocated to facilitate cattle production, and perhaps this allocation may help explain the precipitous decline in Namibian cattle production since the 1970s (Dave Joubert, pers. comm., 10/22/2014).

Larson, A., Ribot, J. (2004) Democratic Decentralisation through a Natural Resource Lens: An Introduction, 16, 1-25.

This article defines the basic principles of democratic decentralization, highlights the potential benefits of democratic decentralization, and addresses the lack of examples of democratic decentralization in natural resource management. As of 2004, decentralization of natural resource management is reported to be occurring in at least 60 countries. However, decentralization can take on various forms, ranging from administrative decentralization to democratic decentralization. Administrative decentralization "aims to help line ministries, such as health, education, public works and environment, to read the preferences of local populations" (3) by devolving power to "local" administrative bodies such as provincial or municipal agencies or NGOs in the area. On the other hand, *democratic* decentralization devolves powers from the central government to local, elected accountable institutions. The tenets of democratic decentralization are as follows:

"Democratic decentralisation is premised on new local institutions 1) being representative of and accountable to local populations and 2) having a secure and autonomous domain of powers to make and implement meaningful decisions" [Ribot, 2002b]

Throughout the decentralization literature, multiple authors (Ribot, 1995; Smoke, 2000; Agrawal and Ribot, 1999) contend that downward accountability of management bodies is essential to ensuring the equity, efficiency, incorporation of local knowledge, and involvement of previous marginalized group in the decision-making process. Thus, democratic decentralization may be the best way to reach these goals.

However, both authors acknowledge that examples of true democratic decentralization of natural resources in not easy to find. In South Africa, administrative decentralization has been the dominant model for nature or game reserve management on communally-owned land. Take for example, nature reserves at Somkhanda and Tembe. These are best classified as cases of administrative decentralization as they devolve power to an NGO called Wildlands Conservation and a provincial conservation agency called Ezemvelo KwaZulu-Natal, respectively. While the surrounding communities may have some input into reserve management on their communal land through their land trust, the ultimate decision making power on reserve management lies with the relevant administrative body. Any democratic reserve decision making institutions that do exist are, by and large, initiated by the particular NGO or reserve management organization, at their discretion and prerogative. For example, Wildlands Conservation, is striving to establish democratic assemblies to get community input into reserve management because local chiefs and the land trust have thus far dominated input to the reserve.

Overall, it is difficult to understand the efficacy of democratic decentralization on communally-owned nature reserves in South Africa because democratic decentralization has not yet been institutionalized. As Larson and Ribot highlight, "Decentralization theory stems from a mix of new institutionalist 'if-then' propositions: if the institutions (that is, actors, powers and accountability) are right, then the outcomes will be positive. We cannot yet say whether these 'if-then' propositions are right, because, for many reasons, decentralizations are not getting to 'if'" (7). My research will highlight the historical and policy reasons why South Africa has not made it to the "if" of democratic decentralization and establish the potential for democratic decentralization to improve conservation and development outcomes on communal reserves and game farms.

### **Example Thesis Paragraphs:**

Notice how this student uses several ecological concepts and theories to argue for conservation policy that emphasizes top predators. She uses the concepts of “apex predators,” and the theories of “trophic downgrading,” “cascading effects,” and “indirect effects” to structure her argument. (the numbers in parentheses correspond to the articles in the annotated bibliography).

Because apex predators play such a crucial role in southern African ecosystems, targeted conservation strategies to sustain populations of lions, leopards, and cheetahs should be prioritized above more generalized conservation schemes. Although there is little data regarding the role of these species in southern Africa's ecosystems, the varied and widespread consequences of the global trend of trophic downgrading illustrate the theoretical effects of the loss of apex consumers in this ecosystem, and the potential for significant indirect effects on ecological processes (1). Failure to address the conservation needs of apex predators and to maintain species diversity within this functional-group would decrease ecosystem resilience and potentially lead to undesirable regime shifts, deterioration of ecosystem services, or even ecosystem collapse (2). Using this theoretical biological framework, studies in the Serengeti substantiate these theories by providing evidence of the cascading effects of predation by large carnivores through their top-down regulation of ungulates in comparable east African ecosystems (3). Largely due to their performance of essential ecosystem functions as keystone species in southern Africa, the great potential for these species to act as biodiversity surrogates could mean that prioritizing the conservation of lions, leopards, and cheetahs would result in aggregate conservation benefits, both for these individual species and for broader-scale conservation efforts in the region (4,5).

This student contrasts the concepts of “administrative decentralization” and “democratic decentralization” to argue that both are required for effective and equitable community-based natural resource management.

Democratic decentralization of land management on communally-owned reserves and game farms in South Africa has the greatest potential to improve conservation and development outcomes by redressing unequal power relations between traditional and conservation authorities and the local community. In post-apartheid South Africa, government conservation priorities have come into direct conflict with ensuring greater land rights for local communities through the land reform process (2). In an attempt to address both land rights and conservation, the post-apartheid government has supported administrative decentralization in the form of joint management schemes between provincial government conservation authorities or

NGOs and local communities (2). However, administrative decentralization of reserve management instead of democratic decentralization has allowed for traditional authorities and conservation elite capture of management decisions (3). While conservation authorities certainly have a role in ensuring conservation goals are met on reserves, democratic decentralization maintains that any local institutions for reserve management must be accountable to and representative of the local populations they serve in order to achieve their goals equitably and efficiently (1). Failing to ensure downward accountability of reserve or game farm management to the local community has led to poor conservation and development outcomes, especially in areas where there is conflict between local elite and the community at large (4). In contrast to the lack of democratic decentralization on communal reserves in South Africa, Namibia's communal conservancies provide a key example of how democratic decentralization of reserve management can lead to positive development and conservation outcomes (5).