

International Student Volunteers

Natural Resources Management Course Outline

Description and Key Concepts: Awareness of the importance of sustainable management of natural resources has increased significantly in the last several decades as a result of scientific research, media attention, and greater accountability and transparency of exploitative practices at global and regional scales. Local communities, governments, and international organizations have come to recognize that the Earth's natural resources are not inexhaustible and need to be protected and conserved in a proactive manner to ensure fundamental ecosystem functioning, as well as their persistence for generations to come. In support of these objectives, this two-week course examines contemporary natural and cultural resource management practices and conservation programs through national and international program placements. Students assist local organizations in attaining their specific conservation goals within ethnic heritage sites, protected areas, or managed lands during the two-week period. This course provides students with the opportunity to: 1) gain hands-on experience working in support of conservation and sustainable management of natural resources; and 2) explore and learn about the host country, its people, cultures, and ecosystems. Through lectures, participatory discussions, exploration, and direct involvement in local conservation and natural resource management projects, this program introduces students to issues including sustainable community development, conservation of biological diversity and ecosystems, habitat restoration, threatened and endangered species recovery, and species inventories.

I. Goals

Through exposure to and direct participation in conservation and management programs, students will gain insight into issues of sustainability and ecosystem conservation that are specific to the host country, yet globally significant. They will learn criteria for identifying and assessing the condition of threatened terrestrial and marine environments, while learning about the challenges faced by human communities who rely on these resources.

II. Tasks

Specific tasks undertaken during the programs will vary with individual volunteer work projects and host country and may include any or all of the following:

- A. Endangered species habitat monitoring and inventories.
- B. Establishing baseline data to promote the sustainable management of cultural and natural resources.
- C. Defining the principles of ecosystem identification, management, and restoration (including removal of invasive species).
- D. Preserving ethnic heritage and historic sites.

- E. Designing interpretive facility resources.
- F. Preparation of sites for ecotourism consistent with conservation of natural systems.

III. Grading & Evaluation

Students are expected to actively participate in all volunteer work activities undertaken by their host organization during the volunteer work component of the program. Students will be evaluated based on satisfactory completion of all of the following criteria:

1. Daily journal entries in a field notebook describing the student's activities, observations of environmental conditions and environmental management practices, and contacts with local resource persons (25%).
2. Participation in all regular group discussions during the two-week project, and leadership of one group discussion as directed by the ISV Instructor (25%).
3. Documentation and evaluation by the ISV on-site Instructor of project results and student performance during the conservation work project (10%).
4. A quality term paper describing the student's specific project and overall cultural and environmental lessons that also draws relevant information from published sources (40%).

Host Countries: Australia, Costa Rica, Eastern Europe, Ecuador, New Zealand, South Africa, and Thailand.

1. Write a daily field journal (25% of grade)

Description: During the volunteer project, field journals should outline and detail the daily activities (daily tasks, encounters, experiences, and conservation lessons learned), the issues that are presented (environmental and cultural controversies), the practical problems faced by local resource managers and how they are being addressed, and personal reflections on the program's goals, challenges and opportunities. Students will be expected to document in-depth conservation information about their projects. Students should also include notes on the cultural aspects of the host country (i.e. local communities) and their apparent influence on local conservation practices.

Throughout the two-week project, students are encouraged to record the group discussion topics and their personal reflections on each topic. ISV Instructors will provide further guidance and ideas for journal writing. Students are expected to write at least three pages of quality journal entries daily. This is an academic journal and **not** a personal diary; any personal reflections or entries that are not related to the academic nature of this journal should be kept in a separate private notebook.

Examples of topics for field journal entries during the project are:

- The social and environmental context in which the host organization operates.
- Specific threats to local flora and fauna, habitats, and ecosystems.
- Background and conservation goals of volunteer work project.
- Challenges and successes of the host organization.
- Daily project activities and tasks and why they are necessary or important (how are they beneficial to organism/habitat/ecosystem/community?)
- Description and characteristics of habitats, local flora and fauna encountered.
- Life history of organisms under study (where applicable).
- Experiences/interactions with local community members.
- Involvement (or lack thereof) of local community members in project maintenance.
- Perceived social and economic benefits and environmental costs of tourism activities (if applicable).
- Summaries and further reflections on Group Discussion topics.

2. Group discussions (25% of grade)

Description: There will be a minimum of six group discussions during the two-week project. Group discussions are scheduled and facilitated by the ISV Instructor(s) and usually last one to two hours. Discussions are intended to encourage sharing of information and ideas, perspectives, and opinions among students and their ISV Instructor. It is an open forum for learning that will assist students in accomplishing their personal and academic objectives during the two-week project.

Discussion topics will cover a broad range of issues relevant to the specific project, host country, activity/location, current events, and conservation at local, regional and international scales. Students are required to lead one discussion and to attend and actively participate in all other group discussions. Failure to attend will result in a zero mark for that particular discussion and a significant reduction in the overall grade for this portion of the course.

Prior to departing for their ISV Program, academic credit students must research and prepare a topic for leading a group discussion during their volunteer project. Students can choose their own discussion topic but should provide their ISV Instructor (or the ISV office) with a general outline of the chosen topic no less than one week before departure for the host country. Discussion topics on issues of conservation and/or sustainable resource management that are not directly related to the specific project are permissible, though topics should be broad enough in scope so that each member of the group can contribute to the discussion. This task will be coordinated by the ISV Instructor. Students are not expected to be “experts” in their project or discussion topic, they are only asked

to think intuitively, critically, and creatively about the problems at hand and the potential solutions; and then to communicate these ideas and concepts to their peers. ISV Instructors will provide input and guidance to students in shaping their discussion.

3. Evaluation for Conservation volunteer work project (10% of grade)

Description: An evaluation form will be completed on each student by the ISV Instructor at the completion of the conservation volunteer project. Students will be assessed based on their participation, critical thinking, advance preparation, attitude and cooperation during the two-week project.

4. Write a term paper (40% of grade)

Description: The term paper assesses the environmental problems in the region/community visited, the goals of the host organization, and considers the contribution of the work performed by student volunteers towards those goals. The paper must be written in three sections that describe several environmental and/or cultural aspects of the student's two-week experience (see outline below). It should place the student's own experiences and observations during the program within the context of local natural resource management and should also draw upon the intellectual resources of the program leaders. Independent research from the primary literature (i.e., academic, peer-reviewed journal articles) is required to provide background and support where necessary. A minimum of six references from accepted sources (see list below in Tips for Writing a Successful Term Paper) must be cited appropriately and listed in a bibliography. Other sources may also be included as additional references.

- The paper is due no later than 28 days from the conclusion of the ISV four-week program (which is six weeks from the end of the volunteer project, regardless of when student returns home), and deadline extensions will not be granted. Failure to submit your paper will result in an 'F' on your transcript.
- The paper should be approximately ten double-spaced pages in length. Section A should make up approximately 40% of the paper, Section B, approximately 50%, and Section C, the remaining 10%.
- The paper should contain appropriate citations, a brief introduction and conclusion, and a bibliography of supporting references. Please note that failure to cite the minimum required references and list references in a bibliography will result in a substantial loss of marks on the term paper.
- Please note that papers will be assessed by the same standards as employed in any university course. Evidence of plagiarism will result in a zero grade for the paper and likely failure of the course.

Section A: Problem definition (40% of the paper)

- Describe the ecosystem or natural resource that is under threat.
- Describe the recent, traditional, or historical conditions/practices that constitute the threat.
- Explain how these conditions/practices threaten the resource. Published articles may be useful here.

- Describe the apparent social causes of the threat. For example, unsustainable practices whether legal or illegal, may be the result of poverty or lack of understanding of ecosystem functioning. The causes of the threat may not be immediately apparent but representatives from the host organization and other local experts can offer an explanation. Students should assess the reasoning behind these explanations through personal observations and with published sources that describe similar threats in other locations.
- How can the threat you described above be reduced or eliminated? What do you think would be the best way to conserve the resource while meeting the needs of the community? Again, published sources will be helpful here.

Section B: Conservation Work Objectives and Experience (50% of paper)

- Describe the host organization for which you worked.
- Identify and explain the key conservation objectives of the host organization's conservation project.
- Describe what your experiences in conservation entailed. How did the work you performed contribute to the project's objectives and conservation of the natural resource? If it did not, why not?
- How do the conservation objectives of the project address the natural resource threat and how do they compare to your own suggestions for conserving the resource? Explain any incompatibility between the project's objectives and your suggestions. How could this be remedied? For example, does a lack of specialized equipment or personnel prevent the host organization from adequately addressing the threat to the natural resource?
- What were the main resources and/or management tools that were employed to meet the objectives of the project?
- Does the host organization receive any funding from outside sources? If not, how do they maintain their operations?
- What are the challenges and opportunities for local resource managers? Describe any current conflicts between the host organization and local communities and discuss the probable motivations of each opposing party. Suggest possible solutions to these conflicts, and address the ramifications for each party if your suggestions were realized.

Section C: Overall Experience and Conclusion (10% of paper)

- What have you learned about conservation from your work experience and related research?
- What have you learned about yourself, your values and your preferences? Identify any changes in attitude and awareness you have taken away with you from this experience.
- Provide a brief synthesis of the two-week program in terms of the environmental, cultural and personal

lessons you have learned.

Tips for Writing a Quality Term Paper

- Follow the paper outline (including formatting requirements).
- Use an appropriate (academic) style and tone in your writing.
- Be concise.
- Follow the guidelines for citing and listing appropriate references to support your work (see below).
- Use your field journal as a resource when writing your paper (but do not cite this as a reference).
- Avoid using direct quotes from references; instead, paraphrase relevant information from the source, followed by a citation.
- Citations within the text should include only the last name of the author(s) and year of source publication (note: for three or more authors, use first author and 'et. al.' in citation and full author list in bibliography).
- List references alphabetically in a bibliography. Include full name of author(s), date of publication, article/book title, journal title, journal pages (also publisher and city of publication for books).
- Be sure to spell out any acronyms used for the first time.
- Start the paper with an introduction and end the paper with a proper conclusion.
- Carefully proof-read your paper for grammar, sentence structure, punctuation, clarity and flow of ideas before submitting it, as these will affect your grade. Do not forget to spell-check!
- Allow yourself enough time to write a well thought-out and organized paper.
- Take advantage of your ISV Instructor as a resource person during the program and discuss ideas for your paper in advance with him/her.

Acceptable sources for **six required references** (minimum):

- Published scholarly books and journal articles (peer-reviewed). Examples of potentially useful journals include *Ecology and Society* (an on-line journal), *Restoration Ecology*, *Conservation Biology*, *American Journal of Botany*, and *American Naturalist*;
- University level textbooks;
- Published technical and scientific reports by national governments, international organizations (e.g. World Bank, UNEP, UNESCO etc.), non-governmental organizations (e.g. World Wildlife Federation, World Resources Institute, Rainforest Alliance, etc.), or scientific associations or projects (e.g. Human Dimensions of Global Environmental Change).

The following may also be used as reference material **in addition** to the required references:

- Non-academic magazines and web-sites;
- Reports from advocacy or non-governmental organizations (e.g. World Wildlife Fund, Sierra Club, etc.);
- Encyclopedias;
- Newspaper articles;
- Brochures;
- Personal discussions with Instructors, project host organization staff, guides, and other relevant stakeholders.

Website links for more hints and tips on writing style:

APA Formatting and Style Guide: <http://owl.english.purdue.edu/owl/resource/560/01/>

Guide to Grammar and Style: <http://newark.rutgers.edu/~jlynch/Writing/index.html>