

## Unit 6: Connecting theory to practice

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### Fact Sheet Assignment Guidelines

#### Introduction

You have learned a lot in this module about soil and landscape characteristics, soil erosion, agricultural practices, and potential impacts of climate change. Hopefully, you now have some understanding of the complex linkages between all of these different concepts. In this assignment, your job will be to think about how these ideas could be useful to a farmer in your region and what recommendations you might make to help farmers plan for mitigation of the effects of climate change. You will need to carefully consider everything you have learned and how you would explain it to someone without a science background.

#### Assignment overview

Your task is to create a **fact sheet** for farmers in your region. Fact sheets are often used by scientists to disseminate results of their work to the general public. For example, a geologist at the USGS who studies volcanoes might produce a fact sheet explaining the volcanic hazards in a particular region. Fact sheets are also commonly used by researchers in agriculture-related fields to share their findings with farmers and citizens. For example, a scientist who studies pests might author a fact sheet about new methods to prevent slugs from eating vegetable plants. ***Your fact sheet should characterize local soil properties important to fertility, discuss regional erosion rates, describe the predicted effects of climate change on erosion rates in your region, and make recommendations for agricultural practices that can be used to mitigate soil loss both today and in the future.***

#### Addressing stakeholder needs

Your fact sheet should include recommendations for how farmers might adapt their practices to mitigate the effects of climate change and/or minimize soil loss through erosion. As you decide what recommendations you will provide, you will need to consider the needs of the farmers along with the science you have learned. You should address the social and economic implications of implementing your recommendations. Take care to acknowledge the challenges farmers could face when trying to implement new practices.

#### General format and audience

Most fact sheets are about two pages long so that they can fit on a single piece of paper (front and back) and have a good balance of text (in a readable font), white space, and images. An effective fact sheet is informative and visually interesting; use your creativity! The layout of your fact sheet is up to you, but here is an example describing the Gulf of Mexico Dead Zone from the United States Geological Survey (USGS):

<http://www.nwrc.usgs.gov/factshts/016-00.pdf>

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It is important to keep your audience in mind as you write the text for your fact sheet. You can assume that your reader has some knowledge of the topic, particularly farming practices, but will not be familiar with much of the terminology we have used in this class. It is important to define any terms you use (see the use of the term “hypoxia” in the USGS example). Informative subject headings within the document will also help your reader follow your narrative.

### Grading and Expectations

Due date:

Total possible points:

Your assignment will be graded based on the following criteria. Please see the *Fact Sheet Grading Rubric* for a breakdown of expectations for exemplary performance, good performance, basic performance, poor performance, and nonperformance.

#### *Content expectations*

In your fact sheet, you should use evidence that you have learned in this module to support your claims and recommendations. Make sure to refer to your notes and previous assignments from the module for guidance. Your fact sheet should contain specific information about your local region. In terms of content, your fact sheet should:

- Define soil sustainability, including processes/activities that influence it, and describe why it is important to farmers in your physiographic region
- Describe local soil properties (e.g. soil horizons, percent soil organic carbon)
- Describe the predicted effects of climate change on summer precipitation in your region and how this will impact erosion rates
- Identify links between erosivity and land management practices
- Make region-specific recommendations for agricultural practices that can minimize erosion
- Address the social and economic need for human action and, from the perspective of stakeholders, the feasibility of implementation

How you organize this information is ultimately up to you, but you should use these items as a guide. Questions related to this content are provided on a separate handout to help you organize your thoughts. It is important to consider your audience and use subject headings that are clear, interesting, and informative (i.e. do not simply title a section “links between erosivity and land management practices”).

#### *Format expectations*

Your fact sheet must:

- Cite sources for all factual information
- Be no more than two pages in length
- Have a balance of readable text, images, and white space
- Use appropriate communication strategies for presenting technical material
- Be well-organized and free of spelling and grammatical errors