Course Syllabus

IH5XX: NATURAL RESOURCES, HEALTH, AND DEVELOPMENT
DRAFT

Objectives:

· Improved understanding of how natural resource use and environmental factors affect human health in developing countries
· Improved understanding of the interactions between household decisions, natural resource use patterns, and health
· Use local level information on these interactions to improve health and resource use projects and policies

Description:

The course examines natural resource issues affecting developing countries, and explores the impacts on communities, households, their decisions, and their health. Key resource use issues include water use (drinking, sanitation, and irrigation), agriculture (intensification, pesticide use, and land degradation), fuel wood scarcity, deforestation, conservation, and mining. For each of these issues, discussions and readings address: 1) global and regional patterns in resource use, 2) ecological processes, 3) household and community responses and resource use decisions, and 4) the influence of these factors on human health. Examples of topics covered include: deforestation and vector-borne disease, malaria and agriculture, water scarcity and quality. Topics are addressed in an interdisciplinary context by examining the interactions between environmental processes, disease ecology, household resource allocation decisions, and other social factors. Related policy issues are also discussed. Readings and exercises examine these issues in a wide range of settings.

Course Instructor:

Rick Rheingans
Dept of International Health
Office: 431 SON
7-2425
e-mail: rrheing@sph.emory.edu

Office Hours: TBA or by appointment
**Course Projects**

Project - National assessment of national of natural resource use on health.
During the course students will develop a preliminary assessment of the expected impact of natural
resource use patterns within a country of their choice. The final report is due at the end of the course.
During the course students will make short presentations regarding the impact of specific resource use
issues on health within their area.

Class Presentations – Students will make class presentations regarding each of three natural resource
and health issues. Presentations will describe how the issues interact in a particular community setting.
Presentations may be based on suggested case study readings listed in the syllabus or other readings.
Students may choose to make the presentations for a community in the country being researched for
the class project, but it is not required. Presentations should be 8-10 minutes long.

**Take Home Exam**

**General Resources:**


Institute.

Lee, J (Eds). 1999. The environment, public health, and human ecology,

and a sustainable world,

Pimentel, D (Ed). 1999. Ecological integrity: Integrating environment, conservation and health,
COURSE SCHEDULE

WEEK 1 – INTRODUCTION: HUMAN ECOLOGY AND DEVELOPMENT

Water - Global, national, and local resource use patterns

Readings:
WRI, 2001. World Resources Institute website (www.wri.org)


WEEK 2 - WATER AND HOUSEHOLD HEALTH - INTRODUCTION
Impacts on households - Distribution of water, time, and health impacts

Exercise: Obtaining data on water availability, quality, and time allocation

Readings:
Kay BH. 2000. Water resources: Health, environment and development,


WEEK 3 - WATER AND SANITATION
Assessing national, regional, and local sanitation conditions using existing data

Sanitation interventions and community assessment
Readings:


**Week 4 - Dams and their impact on health - dislocation, changing vector habitat, agriculture**

Class presentations: Water use and health issues

Readings:


**Week 5 - Agriculture - Global and regional land use patterns**

Changes in global agriculture - Impacts on the environment and communities

Broader health consequences of intensification - dislocation, nutrition

Readings:

WRI, 2000. Sections on agriculture

Washington, DC: World Resources Institute.


**Week 6 - Agricultural Intensification: Ecological and Social Dimensions**

**Impact of pesticide and fertilizer use on households, communities, and health**

**Readings:**


Albert LA, 1996. Persistent pesticides in Mexico, Reviews of Environmental Contamination & Toxicology, 147:1-44.


**WEEK 7 - AGRICULTURE, IRRIGATION, AND MALARIA**

**Assessing the potential impact of agricultural development on malaria in specific areas**

**Readings:**


**WEEK 8 - AGRICULTURE AND SPECIFIC DISEASES (SCHISTOSOMIASIS, )**

Class presentations: Agriculture and health

**Readings:**


**WEEK 9 - FORESTS - GLOBAL, NATIONAL, AND LOCAL USE PATTERNS**

**Deforestation and health**

**Readings:**


WEEK 10 - FORESTS, FUELWOOD, AND HEALTH

Readings:


**WEEK 11 - SAVANAS, WETLANDS, AND OTHER RESOURCES**

Class presentations: Forests and health

**Readings:**


**WEEK 12 - MINERAL RESOURCES, POLLUTION, AND HEALTH**

**Gold mining and mercury poisoning**

**Fish contamination and Native American communities in North America**

**Readings:**


Wheatley, B, MA Wheatley, 2000. Methylmercury and the health of indigenous peoples: a risk management challenge for physical and social sciences and for public health policy, Science for the

**WEEK 13 - ASSESSING THE HEALTH IMPACT OF DEVELOPMENT PROJECTS**

**Readings:**


**WEEK 14 – CONCLUSIONS – INTEGRATING NATURAL RESOURCE, DEVELOPMENT AND HEALTH STRATEGIES**

Class presentations

**Readings**

