Research paper assignment for NGEA03

All science and research is based on the scientific method, social science as well as natural science. The scientific method, also called the hypothetico-deductive model, is based on the principle that we can pose a hypothesis that can be tested and falsified. In real-life science this often means we pose a question or a hypothesis, design an experiment or a method for testing and evaluating the hypothesis, then present the outcome(s) of the test in a clear way that allows others to reproduce the test and come up with the same result(s). This is also the basis of the peer-reviewed scientific literature, where anyone can submit a manuscript (a report of a specific research study) to one of the many scientific journals, have it scrutinized by experts, and if accepted have it published and presented to the rest of the scientific community.

In this assignment you are to take the role of the reviewers, i.e. the experts that carefully read and comment the presented research, before it's being published. You will work in pairs, each pair working with two research papers on the topic of remote sensing. You will work together to present these two papers from a reviewers' point of view, both in written and oral form. The assignment is divided into two tasks:

Task 1: General questions about scientific papers:

Answer the questions below about scientific papers and hand in before ***September 18*** *(1 week).*

1. What is meant by a scientific article/paper? What procedure does the paper have to go through before it will be published?

2. Describe the difference between the following types of papers:
    a. Research article/paper
    b. Review article/paper
    c. Short communications/letters

3. What is measured by the *impact factor* of a scientific journal?

Your answers document should not be longer than one page. Mail your answers document to anna_maria.jonsson@nateko.lu.se

Task 2: Report and oral presentation

Read and present the two papers in a written report as well as an oral presentation. The papers should be presented from the reviewers' point of view:

a) Read scientific paper 1 and prepare to give a general presentation according to **Issues for Reviewer 1** (see next page).
b) Read scientific paper 2 and prepare to give a detailed presentation according to **Issues for Reviewer 2** (see next page).
c) Go through the **Issues for both reviewers** together with your paper-mate (see next page).

Report: Deadline October 20

Prepare a report together with your paper-mate. The report should be carefully prepared and deal with "issues for reviewer 1", "issues for reviewer 2" and issues for both reviewers. The authors for each review should be clearly stated. The total report should be 2-3 pages long, Times New Roman, 12 pt, single line spacing. Mail your report to anna_maria.jonsson@nateko.lu.se on **October 20** at the latest.

Oral presentation: October 27

Prepare to do an oral presentation together with your paper-mate. Each presentation (paper) should be about 5-10 minutes long. Give some extra thought on what to include (what's most important to tell the audience?) and how this should be structured and presented in the best way. Remember to keep the time limit!

Evaluation and marks

The assignment will be marked based on both the written report and the oral presentation. Marks are U (not passed), G (passed) and VG (passed with distinction). The first task will not be marked.

NGEA03: *Research paper assignment*

Issues for reviewer 1

- In what kind of scientific journal is the paper published? What kind of papers do the journal usually publish, impact factor, history, numbers of volumes/year etc.).
- What kind of paper is this (article, short communication, review)
- What is the focus of the aim in relation to remote sensing? Methods/Detection/Detection of changes in time/experimental-technical/…
- Area of subject
- General aim
- Importance in a wider perspective
- How many other papers have cited this paper?
- When and why was the paper cited?

Issues for reviewer 2

- Aim(s)
- Sources –data used to solve the aim. Remote sensing data – resolution (spatial, temporal)
- Study area
- Conclusion + review: is the aim clear and did the study succeed to solve the task. Why/why not? Relate to Aim and Focus (issue for reviewer 1)
- Results –do you agree with the conclusion? Are the results correctly interpreted?
- Methods – do you think that other types of remotely sensed data (higher spatial/temporal resolution, other wave bands) would have improved the results? Why? Would it be possible to use other data than remotely sensed data to solve this aim? How and why/why not?

Issues for both reviewers

- General thoughts about the paper.
- Was it easy to understand the aim and conclusion?
- Was it possible to follow the methods used? Too detailed/general?
- How about the terminology, was it easy/difficult to understand?

Paper	Reviewer 1	Reviewer 2
Multitemporal analysis (1940-1996) of land cover changes in the southwestern Bogotá highplain (Colombia)		
Impacts of forest cover change on ecosystem services in high Andean mountains		
Application of Aerial Photography and Photogrammetry in Environmental Forensic Investigations		
The history of intertidal blue mussel beds in the North Frisian Wadden Sea in the 20th century: Can we define reference conditions for conservation targets by analysing aerial photographs?		
Calibrating Corn Color from Aerial Photographs to Predict Sidedress Nitrogen Need		
Aborigine-managed forest, savanna and grassland: biome switching in montane eastern Australia		
Quantitative assessment of vegetation structural attributes from aerial photography		
Braided River Flow and Invasive Vegetation Dynamics in the Southern Alps, New Zealand		
Optimizing templates for finding trees in aerial photographs		
Evaluating Light Availability, Seagrass Biomass, and Productivity Using Hyperspectral Airborne Remote Sensing in Saint Joseph's Bay, Florida		
Using aerial photography for identification of marine and coastal habitats under the EU's Habitats Directive		
Historic land cover change in the agricultural Midwest using an object-based approach for classification of high-resolution imagery		
Estimating basal area coverage of subtidal seagrass beds using underwater videography		
The Influence of Land Use Change on Landslide Susceptibility Zonation		
River and landslide dynamics on the western tanganyika rift border, uvira, dr congo		
A methodological study for biotope and landscape mapping based on CIR aerial photographs		
Mapping of Periglacial Geomorphology using Kite/Ballon Aerial Photography		
Detection of Vegetation Degradation on Swedish Mountainous Heaths at an Early Stage by Image Interpretation		
High-resolution vegetation data for mangrove research as obtained from aerial photography		
Stream change analysis using remote sensing and Geographic Information Systems (GIS)		
Biophysical and Biochemical Sources of Variability in Canopy Reflectance		
Quantifying the cool island intensity of urban parks using ASTER and IKONOS data		
Progressive abandonment and planform changes of the central Platte River in Nebraska, central USA, over historical timeframes		
Glacier variability (1967-2006) in the teton range, Wyoming, United States		
Classification of Australian forest communities using aerial photography, CASI and HyMap data		
Malaria incidence in nairobi, kenya and dekadal trends in ndvi and climate variables		
Water balance approach for rainwater harvesting using remote sensing and GIS techniques, jammu himalaya, india		
The use of large scale Aerial photography to inventory and monitor arid rangeland vegetation		