



source: WWF Living Planet Report 2016

GIS & ECOSYSTEM SERVICES in the Helsinki Capital Region

Basics of GIS

SUMMARY: This course will explore the potential of GIS in landscape studies and planning identifying, mapping and assessing Ecosystem Services in the Helsinki Capital region and to explore existing or new methods for the implementation of these tasks.

INTRODUCTION: How can Ecosystem Services be classified and assessed? Which kind of operation would be needed to identify, map and assess Ecosystem Services? How can these operations be conducted using GIS? How can computers help us in processing the increasing amount of available data? Can they create new layers of integrated information? Which algorithms should drive the combination and generation of those new layers? How can ecological and landscape studies, computation and map algebra be interconnected?...

In the course MAR-E1046 Basics of GIS we will try to answer all those questions by working simultaneously in the basics of GIS, in the principles of map algebra (combination of geographic data and spatial layers) and in their application on Ecosystem Services mapping and assessment:

- PART1: Introductory part exploring the conceptual and practical potential of geographic information
- PART2: Methodological research on the existing methods for Ecosystem Services mapping and assessment
- PART3. Application of the acquired knowledge in the Helsinki Capital Region, where the students will be invited to use or define their own methodology and to maximize the potential use of GIS in the development of their work.

• **Our motto in this course: There is no better way to learn something than teaching it to a computer...**

BASIC COURSE (3 cr. GIS + theory of Ecosystem Services) / FULL COURSE (8 cr. GIS+ theory & practice of Ecosystem Services)