Sustainable Management and Valuation of Ecosystems

Teaching staff contacts – Coordonnées de l'équipe pédagogique :

Jean-Pierre Amigues
Email : jean-pierre.amigues@tse-fr.eu
Office : MS110 Meeting after prior appointment by email.

Arnaud Reynaud
Email : arnaud.reynaud@inra.fr
Office : MS204 Meeting after prior appointment by email.

Course's Objectives – Objectif du cours :

Short descriptions of each topic:

Sustainable management of biological resources: The course is an introduction to the field of bio-economics. The lecture browses through distinctive works in this field and discusses various topics in human-environment interactions, forest management, global oceans commons, biodiversity protection and management, bio-mimicry.

Ecosystem services: The course provides some examples of environmental valuation studies applied to biodiversity and ecosystems at different scales (from local to global). This course is designed to train students in a broad set of non-market approaches to environmental valuation applied to biodiversity and ecosystem services. We will cover some theoretical issues but the lectures will be driven mainly by empirical examples.

Course outline

Sustainable management

1- Human-environment interaction as a predator-prey problem

2- Forest economics

3-Global oceans commons

4- GMO and bio-resistance

5- Biodiversity
    – As a collection problem
    – As a competition between species problem with human interference
    – As a spatial management problem

Ecosystem services:

1- An introduction to the valuation of ecosystem services

2- Valuing biodiversity and ecosystems – Methods & techniques

3- Valuing biodiversity and ecosystems – Examples and implementation issues

Prerequisites – Pré-requis :

No special prerequisites except for knowledge about economics obtained either prior, or during the first semester of TSE M2 E&E.

Grading system – Modalités d'évaluation :

Participation/presence in class will represent 10% of the grade.

The remaining 90% of the grade will be based on a written report in which the students identify and constructively discuss an environmental/ecological problem related to one of the topics of the course (the preferred topic is to be chosen by the student him-/herself).

Bibliography/references – Bilbliographie/références :

Sustainable management: All the background of the course (papers, reports) will be available on the Moodle platform prior to the lecture.

Ecosystem services: The required reading will be based on published peer-reviewed articles and lectures notes (that will be given to the students before each session).