Ecosystem Management and Policies

Course title – Intitulé du cours	Ecosystem Management and Policies
Level / Semester – Niveau /semestre	M2 / S2
School – Composante	Ecole d'Economie de Toulouse
Teacher – Enseignant responsable	Marion Desquilbet - François Salanié
Other teacher(s) – Autre(s) enseignant(s)	Bard Harstad (Oslo University)
Other teacher(s) – Autre(s) enseignant(s)	Laurence Huc (toxicology)
Other teacher(s) – Autre(s) enseignant(s)	Pierre Lebailly (epidemiology)
Other teacher(s) – Autre(s) enseignant(s)	Clélia Sirami (ecology)
Other teacher(s) – Autre(s) enseignant(s)	
Lecture Hours – Volume Horaire CM	30
TA Hours – Volume horaire TD	
TP Hours – Volume horaire TP	
Course Language – Langue du cours	Anglais
TA and/or TP Language – Langue des TD et/ou TP	

Teaching staff contacts – Coordonnées de l'équipe pédagogique :

Marion Desquilbet, marion.desquilbet@tse-fr.eu, office T.323, appointment by e-mail
François Salanié, francois.salanie@tse-fr.eu, office T332, appointment by e-mail

Course Objectives – Objectifs du cours :

Understand that some problems need a mix of economics and biology to be addressed.
Know how to read and criticize both the grey literature and the academic papers.

Prerequisites – Pré requis :

No prerequisites.

Practical information about the sessions – Modalités pratiques de gestion du cours :

Participation is compulsory. Rigor and enthusiasm are much appreciated.

Grading system – Modalités d'évaluation :

20% of the grade is determined by attendance and participation; 80% of the grade will be determined by an individual term paper that aims at evaluating real policy in the light of the course material.

1) Participation and attendance: be on time, participate.
2) For the term paper your mission is to:

- Choose a real regulatory policy (or law) related to an ecological or biological issue: for example, a policy against deforestation in Brazil, against over-fishing in Iceland, for protecting wetlands in Great Britain, for protecting ecosystems against invasive species, for regulating the use of genetically modified crops, for managing antibiotic prescription practices, etc...
- Write a report on this policy, as if you were the advisor in charge of evaluating the policy: first a summary of the situation, then a diagnosis of the policy, finally some suggestions for reform.

In particular, in the report you need to accurately identify the sources of economic and ecological/biological issues:

- for the economic issues this means identifying the externalities and the sources of these externalities: this should be quite straightforward since you are already familiar with this concept
- for the ecological/biological issues this means describing in what ways there is mismanagement of the ecological/biological resource at hand (the forest, the stock of fish, an invaded ecosystem, the biodiversity in a given ecosystem, …), and the reasons for this mismanagement; for instance, is it because property rights are not well defined? is it because information about the population is missing? is it because the reproductive season is disrupted by human activity? is it because the habitats are becoming too fragmented? etc.

The second part represents the element of this course which is meant to give you an edge in the competition for jobs in companies and organizations that evaluate economic and ecological consequences of human activities. Since this is likely the first time you are getting acquainted with ecological/biological issues, we will clearly not expect you to fully master these concepts. Instead, view it is as an opportunity to combine insights about the economic consequences of human activities with some insights about their ecological/biological consequences. The report should refer to relevant theory and to any relevant data that you'll find on the Internet. The report should include at least 10 pages written by you (this excludes for example tables or graphs that you reproduce from other sources), and a bibliography. You may also propose a modelling of the situation, but only if it is useful to your report.

Bibliography/references – Bibliographie/références :

A useful and simple reference is: Perman, R., Y. Ma, M. Common, M. Maddison, and J. Mc Gilvray (2011), Natural Resource and Environmental Economics, 4th edition, Addison Wesley, Harlow. (Chapters 14, 17, 18).

Additional references will be provided on the course moodle.

Session planning – Planification des séances :

The class will take place from January 2021 to March 2021. It is organized by theme:

François SALANIÉ (12h):

- Environment and Biodiversity;
- Fisheries;
- Epidemiology and antibiotics.

Bård HARSTAD: 3h about conservation policies.

Marion DESQUILBET, with participation of Laurence HUC, Pierre LEBAILLY and Clélia SIRAMI (15h):

- Issues and challenges for sustainable food systems
- The land sparing / land sharing debate: should we intensify agriculture to save land? How informative are sustainability standards on this issue? A multidisciplinary perspective in ecology, economics and science and technology studies

- Pesticide regulation: authorization procedures, taxation, effects of a ban on pesticides, effects of the Common Agricultural Policy on pesticide use
- The bio-economics of chemical versus biological or agroecological pest control
- Pesticide resistance, genetically modified crops
- The challenge of measuring the impacts of pesticides on human health and the environment: a toxicological and epidemiological perspective

Distance learning – Enseignement à distance :

To be completed in due time.The basic plan is to have remote sessions on Zoom.