

## PhD Program in Science & Policy: Scenario-building and modelling

**Lecturers:** Véronique Lamblin (Futuribles) Claude Garcia (ETHZ)

**Location:** UZH, Botanical Garden, ZOD F10.03

**Dates:** December 13, 14 and 15, 2016

**Credit Points:** 1 ECTS (not part of the Science and Policy curriculum!)

**Contact:** Dr. Luisa Last (llast@ethz.ch)

### Course Overview (and Objectives)

This 3 day a workshop consists of two components highly relevant to scientific conceptions and visions of the future.

The first 2 days will focus on *scenario-building*. It will be organized around a practical workshop allowing students to test the scenario method, specific to foresight practices, through the exercise. The goal is not to perform a real foresight study in just 2 days, but to ensure that students 1) understand the basic requirements to build consistent and argued scenarios and 2) the different uses of scenario-building.

The third day will focus on *coupling modeling and scenario-building* through a role-playing game experiment. The day will be structured in 3 parts. Firstly, we will play a game of resource management called ReHab, pitching players as *Harvesters* against *Park Managers* in a landscape with resources and protected species... Then, we will debrief the game session to elicit the lessons learnt through the game, the role of knowledge, trust, monitoring, etc. in managing natural resources. Finally, we will discuss the Companion Modelling approach and the use of simulation models and/ or role-playing to foster dialogue, devise management strategies and explore alternative scenarios. We will address the strengths of the approach, as well as its limits.

### Course Program

#### Part 1: Scenario-building

Dec 13<sup>th</sup> Morning 9 am- 1 pm

- General introduction to foresight : history, philosophy, foresight/ forecast, foresight and trends watch, the different purposes for doing scenarios
- The scenario process step by step
- Workshop topic definition

Dec 13<sup>th</sup> Afternoon: 2 pm - 5 pm

- Workshop phase 1: System architecture, key drivers / components
- Workshop phase 2: key driver documentation/ future hypothesis

Dec 14<sup>th</sup> Morning: 9 am- 1 pm

- Workshop phase 3: scenario building (and the course report)
- A foresight European project performed with this method explained

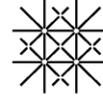
Dec 14<sup>th</sup> Afternoon: 2 pm - 5 pm

- Use of scenario and organization according to purpose
- Other “schools” of scenario building



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of Basel

- Synthesis of the session

### Part 2: Modelling

Dec 15<sup>th</sup> Morning 9 am - 1 pm

- The ReHab game: briefing, game session and debriefing about the game experiment

Dec 15<sup>th</sup> Afternoon: 2 pm - 5 pm

- Lesson learnt from the game
- Introduction to the Companion Modelling approach
- Discussion on coupling modeling and scenario-building

Course end: 5:30 pm

#### **Individual Performance and Assessment:**

In order to obtain the ECTS point, each participant is required to actively participate in the case-study work and discussions during the course days. In addition, participants are expected to submit a summary of their group work in order to receive the certificate.

#### **Prior Knowledge:**

Foresight is trans-disciplinary by definition thus no specific knowledge is required.

**Number of Participants:** A maximum of 16 students will be able to enrol in this course.

#### **Trainers (description of max. 200 words):**

##### **Véronique Lamblin (Futuribles)**

Born in 1961, Material Science Engineer State Diploma (University Paris XIII, France), Master in Mechanical Engineering (University of Laramie, Wyoming, U.S.A.) and "General Management and Business Program" at the European Center for Continuing Education (CEDEP), INSEAD Business School in France.

Futures and Strategy Studies Director in the Futuribles Group since 2002. Futures studies performed in the fields of energy resources and technologies, water, transportation and mobility, sustainable cities, agriculture, science and technology research, intangible assets of organizations, global economic and social issues in Western Europe for companies and public bodies. She also participated in managing specific territories foresight studies.

Before 2002, she has been Strategy Project Manager for the Corporate and Strategic Planning of Renault (car) Company. In charge of the Long Term (10 to 15 years) Strategic Project Report of the Renault Group and futures and strategic studies.

##### **Claude Garcia (ETHZ)**

Claude Garcia is a tropical ecologist working for CIRAD (French International Centre of Research and Agronomy for Development). Since 2012, he took the lead of the Forest Management and Development Group, in the Department of Earth System Sciences of ETH Zürich (Switzerland). His research aims at understanding tropical landscapes under change. He develops approaches to embrace (i) ecosystem and their processes, (ii) stakeholders and their strategies and (iii) the norms and institutions the latter establish to regulate access to the former. His goal is to balance conservation and development through better public policies bridging disciplines and taking into account local knowledge, constraints and opportunities.  
<http://www.fordev.ethz.ch/>