

Course title: Stable Isotope Analysis for the study of coastal food webs: theory and practice

Dates: 09-10 November 2016

Location: HCMUS (in the framework of the SEDES International Joint Laboratory)

Lecturers: Audrey Darnaude (CNRS, UMR MARBEC, Montpellier, France)

Number max of students: 30

Students' needs: laptop with an internet connexion.

Stable Isotope Analysis for the study of coastal food webs: theory and practice

2 days, Audrey Darnaude (CNRS, UMR MARBEC, Montpellier, France)

This course should be comprehensible for any person having basic training in biology/ecology and statistics (calculation of means and standard deviations).

Wednesday 09 November 2016: Scientific background and illustrative example
(lecture - open to all – no limit on attendance)

- 09:00 - 11:30
- 13:00 - 16:00

During this first day the lecturer will:

1. Explain why describing trophic relationships is important for understanding ecosystems structure and functioning,
2. Present the main existing techniques for this,
3. Illustrate the value of SIA for unravelling complex trophic relationships within coastal food webs, through the case study of the food webs sustaining flatfish populations in front of the Rhone River delta (NW Mediterranean).

Thursday 10 November 2016: hands-on training course based on a practical example
(maximum possible number of students = 30)

- 09:00 - 11:30
- 13:00 - 16:00

During this second day, the students will be put in a “real life” situation, and taught step by step how to exploit SIA data to infer trophic relationships in coastal areas. For this, the lecturer will use the example of a study we made a few years ago which aimed at identifying the prey and ultimate food sources (marine, estuarine or terrestrial) of the juvenile of a fish species of great economic value in a Mediterranean estuarine nursery.

1. First, the lecturer will present the study undertaken, explain the sampling strategy adopted in the field and the laboratory experiments performed.

2. Then, the students will be given real stable isotope data to play with and the lecturer will provide them step-by-step guidance to learn how to exploit them and interpret the results obtained. This will require computers or digital calculators to make the necessary calculations and a ruler and color pencils for drawing the graphs.

For day 2, the lecturer will send the working document (~10 pages) as a pdf file in advance. It will have to be printed so each student can get a hard copy at the start of the day.
