

Academic training in the South:
experience from training biology students in
mathematical (DEB) modelling

Laure Pecquerie
LEMAR – IRD
laure.pecquerie@ird.fr

Context

- Understanding the impact of climate change and stressors of different nature (contaminants, hypoxia, acidification, parasites, etc) on the life cycle of marine organisms
- Focus on coastal fisheries and aquaculture resources in the South (Upwelling ecosystems in Mexico, Peru, Senegal)
- Approach: mathematical modelling of the life cycle (growth, development, reproduction)
- NOTA of importance for the workshop → local knowledge that we should integrate (cf T. Brochier's work in Senegal) but no general mechanism/method to implement it in my field ...yet

Little participation from Southern countries to the DEB tele-course



2013 – 2017 :

- Participants of a few students (IRD funding) to the Telecourse and practical course
- 2 lecturers and 1 researcher from LEMAR : courses in Peru and Mexico, master level (Funding IRD, French embassy, Doctorate school in Mexico)

LEMAR is organizing the 2019 edition : objective is to stimulate more participants from the South

Challenges:

- South to North
 - PhD students: IRD, LabexMER
 - Master students: Bilateral calls (e.g. Mexico-France), MIC
- In the South
 - Researchers and lecturers from the North: IRD, LabexMER, MIC + French embassies
 - Public: PhD and master students, but others? (how to target students with higher connection to local communities?)

Challenges: Funding

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Challenges: On the long run?

- Academic training: yearly classes? How to make it perennial in the South?
- Implications from lecturers: not yet recognized but on-going initiatives (Regional masters)
- MOOC (Massive Open Online Courses) → DEBX University of Lisbon : 1st edition this year, PhD students

→ Development of DEBSE@: a SPOC (Small Private Online Courses), uses of flipped classroom concept (first online videos and then projects with mentor during class)

Funding from LabexMER but requires more funding to complete it

Prospectives

- Ocean University Initiative: objective is to provide support during DEBX MOOC (5 weeks, Feb 2019)
- ISblue (2019-2028) → (substitute) member of Training committee (“Living ocean and ecosystem services”) to foster initiative toward the South
- Initiatives similar to Université Mer-Education (1 week every year for teachers) in the South?
- Your suggestions?

