

Excellence in the tropics: Erasmus Mundus Joint Master Degree in Tropical Biodiversity and Ecosystems (TROPIMUNDO)

Chong Fiona Ho Yee^{1,2,3}, Shaikh Hisham^{1,2,3}, Wolswijk Giovanna^{1,2,3,4}, Dominguez Martinez Rosa Mar^{1,2,3,4}, Nève de Mévergnies Thibault^{1,2,4,5}, Fernández Mató Pol^{1,2,3,4}, Osborn Amanda^{1,2,3,4}, Van de Sande Eliza^{1,2,4,5}, Behara Satyanarayana⁴, Bin Muslim Aidy⁴, Kodikara Arachchilage Sunanda⁶, Jayatissa Loku Pulukkuttige⁶, Besse Pascale⁷, Radanielina Tendro⁸, Nguetsop François⁹, Imbert Daniel¹⁰, Coste Sabrina⁵, Santini Giacomo³, Riéra Bernard¹¹, Dubuisson Jean-Yves¹², Triest Ludwig² and Dahdouh-Guebas Farid^{1,2}

- ¹ Department of Organism Biology, Faculty of Sciences, Université Libre de Bruxelles (ULB), Avenue F.D. Roosevelt 50, CPi 264/1, 1050 Brussels, Belgium
E-mail: info@tropimundo.eu
- ² Department of Biology, Faculty of Sciences and Bio-engineering Sciences, Vrije Universiteit Brussel (VUB), Pleinlaan 2, 1050 Brussels, Belgium
- ³ Università degli Studi di Firenze - UNIFI, Dipartimento di Biologia, Via Madonna del Piano 6, 50019 Sesto Fiorentino, Italia
- ⁴ Universiti Malaysia Terengganu – UMT, Institute of Oceanography and Environment (INOS), Kuala Nerus, Malaysia
- ⁵ Université de Guyane – UdG, AgroParisTech-ENGREF, INRA, UMR CIRAD-ENGREF-INRA-CNRS, 'Ecologie des Forêts de Guyane', Campus Agronomique de Kourou, 97387 Kourou, Guyane Française
- ⁶ University of Ruhuna - RUH, Department of Botany, Department of Botany, University of Ruhuna, Wellamadama, Matara 81000, Sri Lanka
- ⁷ Université de la Réunion - UNIRé, Saint-Denis, Réunion Island
- ⁸ Université d'Antananarivo – UNIVANTA, Dept. of Plant Biology and Ecology, Dept. of Plant Biology and Ecology, University of Antananarivo – UNIVANTA, BP 906 Antananarivo, Madagascar
- ⁹ Université de Dschang – UDSch, Department of Plant Biology, BO Box 96, Dschang, Cameroon
- ¹⁰ Université des Antilles – Uda, Fouillole - BP 250 - 97157 Pointe-à-Pitre, Guadeloupe
- ¹¹ Musée National d'Histoire Naturelle – MNHN, Ecologie et Gestion de la Biodiversité, Rue Cuvier 57, 75005 Paris, France
- ¹² Sorbonne Université – SU, Institut de Systematique, Evolution, Biodiversité, Place Jussieu 4, Boite 604, 75000 Paris, France

TROPIMUNDO is the **Erasmus Mundus** Joint Master Degree in Tropical Biodiversity and Ecosystems funded by the European Commission's excellence programme Erasmus Mundus. It is the first MSc program (2 yrs, 120 ECTS) that integrates the knowledge and skills related to four adjacent interlinked tropical ecosystems under threat (**tropical rainforests and woodlands, wetlands, - both terrestrial and coastal such as mangrove forests, seagrass beds and coral reefs**). Study of these ecosystems is crucial to understand, protect and manage tropical biodiversity in an era characterised by an international **biodiversity crisis** with imminent risks of extinction of species due to global warming and anthropogenic impacts such as habitat destruction and changes in land use.

TROPIMUNDO is unique in incorporating a **2nd semester** (with theoretical courses and a significant field course) in the tropics in **Guadeloupe**, France (Université des Antilles – Uda), **Cameroon** (Université de Dschang – UDSch), **Madagascar** (University of Antananarivo – UNIVANTA), **Reunion Island** (Université de La Réunion - UNIRé), **Sri Lanka** (University of Ruhuna – RUH) or **Malaysia** (Universiti Malaysia Terengganu – UMT). These institutions cover specialisations in Caribbean insular ecosystems, Central African terrestrial ecosystems, Malagasy forest ecosystems, Tropical forest ecosystems of Reunion Island and the South West

Indian Ocean Region, Sri Lankan terrestrial and aquatic ecosystems, Malaysian mangrove ecosystems and other South-East Asian terrestrial and coastal ecosystems, covering a wide choice of skills and qualifications in tropical biodiversity and ecosystems.

Furthermore, TROPIMUNDO brings together European expert higher education institutes, with long-standing worldwide expertise in tropical rainforests and woodlands and in coastal ecosystems in Belgium (**Université Libre de Bruxelles – ULB, Vrije Universiteit Brussel – VUB**), France (**Sorbonne Université – SU, Muséum National d'Histoire Naturelle – MNHN and Université de Guyane – UdG**) and Italy (**Università degli Studi di Firenze – UNIFI**). They integrate world class scientific education and research expertise on the aforementioned tropical ecosystems and experience in designing and teaching in international MSc programs. The 1st semester primarily aims at teaching basic courses in Europe, whereas the 3rd semester focuses on specialised courses at one of the European partners. The 4th and final semester is dedicated to the thesis. Graduates obtain a **joint degree**, a joint Europass Diploma Supplement, a Europass Mobility and a Europass Language Passport. TROPIMUNDO's **learning outcomes** stretch far beyond academic knowledge and insight, but also aim at demonstrating enhanced capabilities in effective analysis and communication, independence, creativity and assertiveness, critical judgement, and ethical and social understanding.

During the two years of the Master program TROPIMUNDO students can concentrate on **botany, zoology** and **integrative ecosystem approaches** in institutions worldwide. Multiple specialisations are included, such as the evolution of tropical **flora** and **vegetation**; faunistic assemblages; **informatics tools** to treat and manage biodiversity data and **databases** (biogeographical, genetic, geographical information systems) including the **management** and **conservation** of historic collections such as herbarium sheets; the study of **diversity, dynamics** and **evolution** of tropical and subtropical ecosystems (with a focus on four related systems, namely tropical rainforests and woodlands, mangrove forests, seagrass beds and coral reefs, including the interactions between flora, fauna, man and the environment within and between each of these adjacent ecosystems); conservation and **restoration ecology** of natural habitats and their biodiversity including competences in sustainable management and governance of biodiversity, and finally, in tropical **ethnobotany**, exploitation and valorisation of **the functions, goods and services of natural habitats** and their resources, and conservation of **traditional ecological knowledge**.

TROPIMUNDO maximises the inclusion of **European languages** by offering a content and language integrated learning program (English or English + French), and it is delivered in a society that is French, English, Dutch, Italian, Malagasy, Sinhala, Tamil or Bahasa Malaysia, which is valorised using buddy programs and Tandem Learning. This aims at improving the students' language capabilities for which facilities are provided by all partners.

TROPIMUNDO management is handled by a multi-level and shared responsibility involving **5 decision bodies** (Steering, Selection, Jury, Internal Evaluation and External Evaluation), and **1 main execution structure** (Coordination Office), all operating with equal commitment by the partners. A series of **Associated Partners**, including scientific institutes, governmental and non-governmental organisations responsible for conservation or management of tropical ecosystems and their biodiversity, and public authorities, agreed to advertise the program, to provide or to communicate existing placements, jobs, internships or thesis perspectives and scholarships, and to assist in evaluating the program. This links TROPIMUNDO to the real and professional world.

Contact

Website www.tropimundo.eu

E-mail: info@tropimundo.eu

Twitter: @TROPIMUNDO

Instagram: @trop_i_mundo