**Master's Project: Cost-benefit analysis of climate change adaptation measures/Disaster Risk Management (DRM) tool**

UDP is offering supervision support for a Master's Thesis Project on "Cost-benefit analysis of climate-change adaptation measures". The opportunity is aimed at students who are enrolled at university on Master's courses in a relevant subject who plan to conduct their thesis research in the coming semester. The project is envisaged to start from January/February to May/June 2021 and will be carried out in collaboration with the main supervisor from the student's home university. Staff from the Impact Assessment & Adaptation Analysis Section of UDP will provide co-supervision within the context of an on-going, real-life project described below.

**Background**

Adaptation to climate change requires inputs from many aspects: institutionally, financially and technically. With the assistance of ICT (Information and communications technology) tools, more innovative and efficient adaptation measures and DRM tools for climate change become possible. However, we lack knowledge about the costs and benefits of implementing such tools in adapting to climate change. What measures are more efficient/effective in building resilience to particular climate impacts? What challenges and opportunities exist to facilitate adaptation and resilience building by applying an innovative DRM tool? Answers to these questions will provide support to climate-change policy making, as well as maximising the innovation outcomes of building climate-change resilience.

The student will examine a real-life case in detail and contribute to the investigation of the costs and benefits. The case study will be part of an on-going project "Building Businesses' Climate Resilience in Sri Lanka (BBCR)" led by UDP. BBCR aims to develop a DRM tool (a mobile App – BBCR App) as an adaptation measure to help small and medium-sized enterprises (SMEs) in Sri Lanka build business resilience to climate disasters, mainly focusing on flooding.

The BBCR Project (<https://unepdtu.org/project/innovative-decision-support-tools-for-building-business-resilience-to-climate-change-in-sri-lanka/> ) is scheduled to end in May 2021. The prototype BBCR App has been piloted in Sri Lanka since August 2020. After piloting, the App will be adjusted according to feedback received, before launching in Sri Lanka. There are plans for commercialising the App (in the public or private sector) in the near feature, and incorporating more features and covering more climate impacts in the long run. A follow-up project proposal (to develop financial adaptation measures for Sri Lanka through flood-modelling technology) is being prepared.

**Project assignment**

The student is expected to:

* Explore cost-benefit analysis of climate adaptation measures in general
* Carry out a case study associated with the BBCR project by
  + Estimating the costs associated with a DRM tool (BBCR APP), e.g. data licenses and fees, infrastructure and operation, outreach and commercials etc.
  + Estimating the potential benefits of applying the APP, e.g. economic, social and environmental benefit
  + Applying both qualitative and quantitative methods in data collecting and processing

**Requirements**

The student should be fluent in English and enrolled at a university on a Master's program in Environmental Economics, Environmental Management or a relevant subject.

Experience in applying cost-benefit analysis in climate/environmental issues is required. The following qualifications are considered desirable:

* Familiarity with the concept of climate-change adaptation
* Experience in (on-line) survey design and analysis
* Experience in developing countries
* Knowledge of the local context

The student will be expected to meet with the UDP staff at UN City, Copenhagen, Denmark on a regular basis, subject to the prevailing COVID-19 restrictions.

**Application procedure**

Fill in and submit the attached application form to [UDPmasters@man.dtu.dk](mailto:UDPmasters@man.dtu.dk) not later than Friday 11 December 2020.

For further information, please contact Dr Jingjing Gao ([jinga@dtu.dk](mailto:jinga@dtu.dk)) or Dr Lindy Charlery ([lincch@dtu.dk](mailto:lincch@dtu.dk) ).