BRITAE

Building Resilience in Tropical Agro-Ecosystems

Website
https://www.britae.lk/

Research problem

Ecological resilience denotes to the capability of an ecosystem to uphold main functions and processes in the face of perturbation or disturbance, either by resisting or adapting to change. Such perturbations and disturbances can contain stochastic actions such as fires, flooding, windstorms, insect population explosions, and human activities such as deforestation, tracking of the ground for oil extraction, pesticide sprayed in soil, and the introduction of exotic plant or animal species. Moreover, climate variability and change threaten food security directly—for example, by reducing crop yields—and indirectly, by disrupting the systems and infrastructure people use to access food.

Most studies of these issues have so far been focused on the impacts of climate variability or extreme climate events on food production. However, other aspects of food security such as access, utilisation or stability have not received the same attention. As a result, our understanding of the underlying factors that make food systems and communities climate resilient (able to absorb climate shocks and stresses without experiencing emergency situations) is limited. At the same time, disaster response strategies and policies targeting food security mainly focus on predicting and managing direct impacts of climate events on food production at the local level, and rarely contribute to building long-term resilience, especially among poor communities.

One of the promising strategies to these dire problems is upgrading of education associated with agroecosystem-based resilience. The main challenge is to consolidate a variety of diverse activities in education quality improvement, such as the delivery of extensive educational programmes and capacity building, and continued knowledge sharing. In order to progress on these efforts, it is necessary to build the capacity and an associated network of experts and institutions.

Project outcomes

The project will strengthen ecosystem resilience development activities that will increasingly build the capacity of professionals to develop a masters degree programme curriculum. Consequently, it will place universities at the centre of national development. Planned outputs include:

1. BRITAE–Capacity building framework development
2. Development of new curriculum
3. Establishment of Smart Agro-ecosystem based Resilience Center for teaching, learning, research and dissemination (SARC)
4. Development and implementation of Building Resilience in Tropical Agro-Ecosystem Master's program
5. Quality assurance and monitoring
6. Dissemination and exploitation of results

The research aims to

BRITAE aims to develop joint curricula modules on building resilience in tropical agro ecosystem in Sri Lankan universities. In doing so, it seeks to increase their capacity to continually modernise, enhance the quality and relevance of education of students to the global market needs and to ensure international cooperation.

Project Objectives:

1. Understand the knowledge gaps in agroecosystem-based resilience through a comprehensive survey framework
2. Develop a joint innovative and adaptive MSc curriculum on tropical agroecosystem based resilience aiming at food security and climate change impacts
3. Develop a Smart Agroecosystem based Resilience Center for teaching, learning, research, and development
4. Develop and implement an online student service platform by blending European practices in education from participating EU universities to program country universities
5. Implement Master's degree program in Building Resilience in Tropical Agroecosystems
6. Prepare academic and administrative staff in the HEIs to undertake innovative research that will contribute to increased ecological resilience to disasters
7. Increase international cooperation by partner HEIs on research programs that tackle ways to increase societal resilience to disasters
8. Reinforce educational and scientific networking among EU and PC universities in the BRITAE
9. Disseminate the project progress, successes, and outcomes

Partners

University of Ruhuna (Lead)
Sri Lanka

Partner Institutions

University of Colombo
Sri Lanka

University of Sabaragamuwa
Sri Lanka

University of Sri Jayewardenepura
Sri Lanka

University of Moratuwa
Sri Lanka

Programme Institutions

Vilnius Gediminas Technical University
Lithuania

Tallinn University of Technology
Estonia

University of Huddersfield
UK

University of Central Lancashire
UK

Contact information

Global Disaster Resilience Centre,
School of Applied Sciences, University of Huddersfield

Principal investigators

Professor Dilanthi Amaratunga
d.amaratunga@hud.ac.uk

Professor Richard Haigh
r.haigh@hud.ac.uk

Researcher

Kinkini Hemachandra
k.hemachandra2@hud.ac.uk

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